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Individual and Societal Wisdom:
Explaining the Paradox of Human Aging and High Well-Being

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ABSTRACT

Objective: Although human aging is characterized by loss of fertility and progressive decline in physical abilities, later life is associated with better psychological health and well-being. Furthermore, there has been an unprecedented increase in average lifespan over the past century without corresponding extensions of fertile and healthy age spans. We propose a possible explanation for these paradoxical phenomena.

Method: We reviewed the relevant literature on aging, well-being, and wisdom.

Results: An increase in specific components of individual wisdom in later life may make up for the loss of fertility as well as declining physical health. However, current data on the relationship between aging and individual wisdom are not consistent, and do not explain increased longevity in the general population during the past century. We propose that greater societal wisdom (including compassion) may account for the notable increase in average lifespan over the last century. Data in older adults with serious mental illnesses are limited, but suggest that many of them too experience improved psychosocial functioning, although their longevity has not yet increased, suggesting persistent stigma against mental illness and inadequate societal compassion.

Conclusions: Research should focus on the reasons for discrepant findings related to age-associated changes in different components of individual wisdom; also, more work is needed on the construct of societal wisdom. Studies of wisdom and well-being are warranted in older people with serious mental illnesses, along with campaigns to enhance societal compassion for these disenfranchised individuals. Finally, effective interventions to enhance wisdom need to be developed and tested.

Introduction

The unprecedented increase in average lifespan over the past century without corresponding expansion of fertility span or significant reduction in chronic disability in later life pose a challenge to the life-history theory of evolution, which posits that there is no reason for surviving beyond reproductive age (Williams, 1957). The average longevity at birth in the US increased from 49.2 years at the turn of the 20th century to 78.7 years in 2012 (Shrestha, 2013). Whereas the initial increase in longevity was attributable to reduced infant and childhood mortality, the expansion of average lifespan since the World War II has been primarily due to older people with chronic illnesses living longer (Congressional Research Service, 2005). With the maximum reported lifespan being 122 years, humans not only live longer than other primates (Finch, 2012), but they also live perplexingly long after becoming unable to reproduce (Williams, 1957) in addition to being physically impaired.

Notably, age spans for fertility and for disease-free life have not shown a significant increase over this period. Thus, there is no good evidence to support a secular increase in the average age of menopause, which is around 50 years today. Classical Greek and Roman sources generally stated a menopausal age range of 40-60, while medieval sources most frequently cited age at menopause as 50 years (Amundsen & Diers, 1973). The data on male fertility with aging have been sparse, but there has been no documentation of an increase in fertility among aging men over the past century or beyond. The overall aging-associated morbidity and chronic disability have also not decreased significantly during recent times (Murray et al., 2013).

There is another puzzle about human aging: several new studies have found that older adults experience increased levels of psychological well-being (Blanchflower & Oswald, 2008; Jeste et al., 2013; Lang, Llewellyn, Hubbard, Langa, & Melzer, 2011; Stone, Schwartz, Broderick, & Deaton, 2010). In several of these studies, a U-shaped curve of well-being was reported – i.e., subjective feeling of well-being was high at the beginning of adult life, then

seemed to decline progressively until it hit the rock bottom in middle age, producing the so-called mid-life crisis, but then appeared to start rising again such that the level of happiness around age 80 was similar to that around age 20. However, some other studies have reported findings inconsistent with a U-shaped curve of well-being (Charles, Reynolds, & Gatz, 2001; López Ulloa, Møller, & Sousa-Poza, 2013; Mroczek & Kolarz, 1998); the exact reasons for the differences in results are unclear. Nonetheless, a common finding across a number of investigations is that of better mental health and increased satisfaction with life during the second half of adult life. In a recent investigation, chronological age from 50 to 99 years correlated positively with self-rated successful aging, despite increasing physical disability (Jeste et al., 2013).

Older age is reportedly associated with a gradual change in attitude which includes greater acceptance of one's physical limitations, contentedness with past accomplishments, reduced preoccupation with peer pressure, and a more realistic appraisal of one's own strengths and limitations. Almeida (2005) noted that, compared with younger and mid-life adults, older adults perceived their stressors as less severe. Carstensen's socioemotional selectivity theory attributes the positivity observed in later life to the effects of a changing temporal horizon (Carstensen, Mikels, & Mather, 2006). In older age, with the growing awareness of limited time left in life, emotional satisfaction takes precedence over information pursuit (in contrast to younger adults).

Below, we seek to provide possible explanation for the paradox of aging – i.e., despite aging-associated loss of fertility and decline in physical health, subjective well-being and happiness increase after middle age, and additionally, there has been an unprecedented increase in average lifespan over the past century. We reviewed the relevant literature on aging, well-being, and wisdom; we also examined the limited available literature on aging and well-being in people with serious mental illnesses, specifically schizophrenia. We propose that, for older humans to survive, thrive, and be happy in old age notwithstanding aging-associated

losses, an increase in individual and societal wisdom is required. We present our rationale under 3 sections: (A) Individual Wisdom, (B) Societal Wisdom, and (C) Well-Being in Seriously Mentally Ill Individuals.

(A) INDIVIDUAL WISDOM

Erikson (1950) conceived of aging as development rather than decline. The last one of his eight stages of psychosocial development (age 65 years to death) was characterized by a conflict between ego integrity and despair, with the desired outcome being wisdom. Forrest and Cote (2002) have proposed an additional phase of life in which emotional realization of one's mortality becomes the main issue. Vaillant (2002), a modern pioneer in this field, calls the later life-stage which comes after the career consolidation of midlife, “generativity”, highlighted by development of “a broader social circle through which one manifests care for the next generation”. Below we review empirical evidence that supports the proposed hypothesis that higher levels of specific components of individual wisdom may help neutralize negative effects of physical decline and infertility in old age.

1) Higher Levels of Specific Components of Personal Wisdom in Later Life:

Research on wisdom-related behaviors has only recently gained interest among neuroscientists and psychiatrists, even though the concept of wisdom dates back to ancient times. Wisdom might be conceptualized as a complex trait associated with advanced cognitive and emotional development that is experience-driven. Although there is no consensus definition of wisdom, most conceptualizations involve integration, and can be considered holistic in the sense that the whole is greater than the sum of its parts (Bangen, Meeks, & Jeste, 2013). Commonly reported characteristics of wisdom include social reasoning and decision making, emotional regulation, insight, contributing to common good (through traits such as compassion, empathy, and altruism), tolerance of diverse value systems, acknowledgement of uncertainty,

spirituality, sense of humor, and openness to new experiences. The relative weighting of these subcomponents is unclear and may vary depending on the context or culture. However, behavior or action is an essential part of wisdom. A wise individual not only thinks wisely, but also acts wisely.

It has been long believed in eastern cultures that wisdom increases with age (Jeste & Vahia, 2008). The studies summarized below are mostly cross-sectional investigations comparing individuals across different age groups. Therefore, survivor bias and cohort effects cannot be ruled out. Nonetheless, consistency of findings regarding certain characteristics suggests that the findings may reflect possible relationship to aging. These components include: social reasoning and decision making, emotional regulation and positivity, spirituality, and decisiveness.

Social Reasoning and Decision Making: Grossmann, et al. (2010) reported that social reasoning seemed to improve with age despite a decline in fluid intelligence. Older adults made greater use of higher-order reasoning schemes that emphasized a need for multiple perspectives, allowed for compromise, and recognized limits of knowledge. Worthy, et al. (2011) found that younger participants were quicker to make choices that led to immediate gratification, whereas older individuals used their accumulated lifetime experience in decision-making to determine the long-term utility and not just the immediate gains.

Emotional Regulation and Positivity: Roecke, et al. (2009) noted that older people were less reactive to daily events— both good and bad— compared to their younger counterparts and that they maintained a relatively stable mix of emotions regardless of positive or negative events. Recent investigations suggest that, as people age, they experience fewer negative emotions, regulate their emotions more effectively, and show positive biases in their memory (Read & Carstensen, 2012). Gooding, et al. (2012) reported that older adults ($\geq$ 64 years) were the more resilient group, especially with respect to emotional regulation and problem solving, whereas younger adults (ages 18-25) had greater resilience related to social support.

Spirituality: In a longitudinal study from the 1920s through 1990 at UC Berkeley, Wink and Dillon (2002) reported that spirituality increased significantly from late mid-life to older adulthood; this occurred earlier and was more pronounced in women than in men.
Decisiveness: Blanchard-Fields, F. (2007) suggest that older adults feel more comfortable than younger adults in dealing with uncertainty and ambiguity.

Other data further suggest that successful cognitive and emotional aging is associated with behaviors that promote brain- and heart-health and cognitive fitness. The MacArthur Network on Successful Aging investigators emphasized the extent to which successful aging and well-being are under our control (Rowe & Kahn, 1998). Recent data support this stipulation by showing that successful agers have higher levels of physical and cognitive activities, the latter including reading, writing, use of computers, and socialization with family and friends, compared to older adults with worse self-rated successful aging (Jeste, Depp, & Vahia, 2010). This finding is consistent with the notion that wise people behave wisely. Such health-enhancing and social behaviors are useful for the older individuals themselves as well as for those around them.

2) Grandma Hypothesis of Wisdom to Neutralize Negative Effects of Infertility in Later Life:

Some data suggest that longer post-reproductive lifespan may play an important role in the survival of the species. Specifically, post-reproductive females may enhance the lifetime reproductive success of their offspring by investing in better survival, growth, and well-being of their grandchildren, as well as allowing their offspring to breed more frequently and more successfully (Finch, 2012). A relatively long post-reproductive lifespan in females has been observed in several species (Carey & Gruenfelder, 1997; Richardson, Burke, & Komdeur, 2007). These post-reproductive females seem to contribute to evolutionary advantages – a process dubbed the Grandma Hypothesis (Hamilton, 1966). Thus, bottle-nose dolphins

breastfeed their grandchildren (Carey & Gruenfelder, 1997). Reproductive killer whale females appear to contribute to their own offspring's survival. The death of a post-reproductive mother increases the risk of death of the offspring up to five folds in daughters and up to 14 folds in sons (Foster et al., 2012). In Seychelles warbler, a species of birds, post-reproductive females tend to become "grandparent helpers"- i.e., subordinates who help raise group offspring (Richardson et al., 2007). The help provided by older females in raising grandchildren may lead to increased fitness and survival probability of those infants.

In humans, both anecdotal and quantitative evidence in pre-modern populations shows that prolonged post-reproductive lifespan is associated with a higher number of grandchildren, and, as a result, greater fitness benefits for that society (Hawkes, 2003; Lahdenperä, Lummaa, Helle, Tremblay, & Russell, 2004). For example, anthropological studies in Tanzanian hunter-gatherers, the Hadza, suggested that grandmother helpers contributed to better survival of their grandchildren by foraging and preferentially assisting their kin (Hawkes, O'Connell, & Blurton Jones, 1997). Even in modern societies, involvement of grandparents in upbringing has been associated with fewer emotional problems, fewer adjustment difficulties, and more pro-social behaviors among grandchildren, especially those living in single-parent or step-family households (Attar-Schwartz, Tan, Buchanan, Flouri, & Griggs, 2009). A study of complete multi-generational demographic records of about 2,800 Canadian and Finnish women born prior to the year 1900 (Lahdenperä et al., 2004) demonstrated the fitness benefits of prolonged post-reproductive lifespan in women. The offspring of post-reproductive mothers bred earlier, more frequently, and more successfully. It is possible, although admittedly speculative, to suggest that these grandmothers' "wise" behaviors contributed to their own long survival as well as to their offspring's successes.

Notably, a similar evolutionary argument has been posed for the persistence of homosexuality in animals and humans: what maintains the underlying genetic propensity for homosexuality, which is associated with reduced fertility? While there are no definitive answers,

some potential explanations have been proposed (Barash, 2012). A “kin selection” hypothesis suggests that, although homosexual individuals do not invest time and energy in their own reproduction, they help their relatives’ rearing of offspring. For example, Samoan homosexual men have been reported to give copious attention to their nieces and nephews, with whom they share about 25% of their genes. Another theory labeled “sexually antagonistic selection” postulates that a fitness disadvantage in one gender could be compensated for by a fitness enhancement in the other gender. Thus, one study found that female relatives of gay men had more children than did those of heterosexual men.

3) Neurobiological Basis for Successful Cognitive Aging (Increase in Individual Wisdom):

The finding of a rise in well-being after mid-life among the great apes (Weiss, King, Inoue-Myrayama, Matsuzawa, & Oswald, 2012) suggests possible neurobiological basis for this phenomenon. Below we discuss several putative mechanisms that might offer at least partial explanation for maintenance of cognitive function in a proportion of older adults.

Compensatory Changes: A review of functional neuroimaging studies suggested that some, but not all, patterns of enhanced activation (suggesting compensation) were associated with better cognitive performance in older adults, especially in the frontal cortex (Eyler, Sherzai, Kaup, & Jeste, 2011). The reverse tended to be true for posterior regions of the brain. fMRI and PET studies have reported changes in aging brain that seem to compensate for losses, thereby contributing to better functioning in some older adults. For example, prefrontal activity during cognitive performances tends to be less lateralized in older adults than in younger ones – a brain pattern referred to as Hemispheric Asymmetry Reduction of OLD age or HAROLD (Cabeza, 2002). Also, while brain activation in posterior regions has been found to be lower in older adults, anterior regions show greater activation than in younger individuals. This relative shift from posterior to anterior activation has been termed Posterior–Anterior Shift with Aging

(PASA) (Dennis & Cabeza, 2008). These processes result in a greater number of neuronal networks (especially in anterior regions) being activated in older age, allowing for relatively "normal" functioning despite aging-associated neuronal and synaptic pathology. Thus, high-performing older adults may neutralize age-related cognitive decline through a plastic reorganization of neurocognitive networks. In an integrative functional, structural, and perfusion imaging study, recognition memory for face-name pairs was associated with more compensatory brain activity in older adults than in their younger peers (Bangen, Kaup, Mirzakhanian, Wierenga, Jeste, & Eyler, 2012).

Synaptogenesis and Neurogenesis: In a review of 50 human studies of structural brain imaging, Kaup and colleagues found that 83% of these investigations reported at least one significant association of successful cognitive aging with bigger structures and stronger connections, especially in prefrontal cortex & medial temporal lobe (Kaup, Mirzakhanian, Jeste, & Eyler, 2011). It is not known, however, what makes these structures larger or connections stronger. Animal studies have shown beneficial impact of environmental enrichment on brain function and even structure – e.g., increased numbers of synapses, dendritic spines, and even new neurons in certain regions of the brain such as the hippocampal dentate gyrus as a result of physical activity along with environmental stimulation (Gage, 2002). Milieu that enables an animal to be more active seems to positively influence adaptive neuroplasticity, reducing neurodegeneration (Lazarov et al., 2005).

Functional Brain Changes in Emotional Responsivity: Research using fMRI demonstrated that older (but not younger) adults showed greater amygdala activation viewing positive pictures than seeing negative ones (Mather et al., 2004). In another study, older adults demonstrated decreased functional connectivity between amygdala and hippocampus, but increased connectivity between amygdala and dorsolateral prefrontal cortex (St Jacques, Bessette-Symons, & Cabeza, 2009). This may help explain the association of aging with reductions in memory for negative stimuli but preserved enhancement of emotional memory,

allowing older adults to reduce their encoding of negative emotional experiences and enhance the encoding of positive experiences. Finally, Brassen et al. (2012) reported that older adults tended to disengage from experiences of regret. Responsiveness to regret was specifically reduced in successful aging, paralleled by autonomic and frontostriatal characteristics indicating adaptive shifts in emotional regulation. At the point in life where opportunities to undo previous behaviors are limited, this tendency might be a protective strategy to maintain emotional well-being.

Thus, data support the notion that aging is not associated only with a loss of brain function. Rather, continued neuroplasticity, promoted by optimal physical and psychosocial stimulation, may underlie higher levels of certain domains of individual wisdom associated with aging.

(B) SOCIETAL WISDOM (PROTECTIVE AND SUPPORTIVE ENVIRONMENT)

We now propose that the increase in longevity during the past century may be related, in part, to greater societal wisdom, including compassion, resulting in protective environment and better healthcare and other support for older adults.

We summarized in Section (A) above a number of studies suggesting an association of aging with several components of individual wisdom along with greater usefulness to younger generations (the Grandma hypothesis) and neuroplasticity of aging (the biological basis for age-associated wisdom). However, there are several important caveats to postulating an overall increase in wisdom with aging.

i) Some components of individual wisdom have been shown not to increase with age. Thus, a study (Mickler & Staudinger, 2008) using a rating scale for personal wisdom based on the Berlin Wisdom Paradigm, found no differences between 83 younger adults (age 20-40) and 78 older adults (age 60-80) on self-knowledge (insight) and self-regulation; furthermore, older adults obtained worse scores on tolerance to ambiguity and self-relativism, partially mediated by

lower fluid intelligence and less openness to new experience. Shammi and Stuss (2003) found that appreciation and emotional response to humor did not change with age. Cross-sectional and longitudinal research shows no increase in level of empathy in later life (Grühn, Rebucal, Diehl, Lumley, & Labouvie-Vief G., 2008).

ii) The studies that reported higher levels of wisdom-related traits in older people were mostly cross-sectional, and therefore, a survivor bias cannot be excluded – i.e., only those people who were wise since their youth, could reach old age.

iii) A contribution of cultural cohort effects to findings related to differences in psychological characteristics with aging cannot be ruled out in many of these studies.

We believe that societal wisdom (with protective and supportive environment) may be more important than individual wisdom in explaining the increase in longevity during the past century. While medical advances have been critical for longer survival of older adults with chronic illnesses such as heart disease, cancer, and strokes, it is the societal compassion (a critical component of wisdom) that allows allocation of its resources to the care of the older people. Just as survival of premature newborns is far more likely in settings of prolonged and committed care by adults, survival of older adults, despite worsening physical, cognitive, and reproductive functioning, is made possible by societies that focus on compassion, empathy, and altruism along with other characteristics of societal wisdom such as superior social decision making, emotional regulation, reflection and insight, decisiveness, tolerance of divergent value systems, and openness to new experiences.

Here one may draw an analogy to lifespans of animals in the wild versus those in protective environments. The lifespan of most higher-order animals is considerably longer in protective environments than in the wild – for example, chimpanzees live about 60 years when protected whereas their life span in the wild is only about 35-40 years (Tarou, 2002). In these protective environments the animals are provided with humane care that is not available to the animals in the wild.

The nature of the “protective” environment may also affect longevity. Clubb et al. (2008) compiled data from over 4,500 elephants to compare survivorship in zoos with protected populations. Overall, bringing elephants into zoos seemed to profoundly impair their viability. The effects of early experience, interzoo transfer, and possibly maternal loss, plus the health and reproductive problems recorded in zoo elephants, suggest stress and/or obesity as likely causes. For African elephants, median life span (excluding premature and still births) was 16.9 years for zoo-born females and 56.0 years for Amboseli females undergoing natural mortality (and 35.9 years with human-induced deaths). Thus, the overall milieu plays an important role in determining individuals’ average lifespan.

How would this scenario apply to humans? More civilized societies that have greater “societal compassion and wisdom” – including safety nets and better care for the old and the disabled - would be expected to have longer average lifespans for their populations than those with few social rules and less societal compassion and wisdom. The latter would selectively favor survival of the fittest from reproductive, physical, and cognitive perspectives. On the other hand, “wiser” families, groups, and societies would exhibit greater well-being and greater longevity across the board. It is difficult to prove that modern societies and their citizens (who have much longer lifespans than previous generations) are wiser than their predecessors, although it has been suggested that there has been a dramatic decline in violence in recent times. Pinker (2011) has shown that violent deaths worldwide declined from 500 per 100,000 people annually in pre-state societies to around 50 in the Middle Ages, and to about 6-8 today. An important reason for this progress may be the spread of empathy. Rifkin (2009) has suggested that civilization has progressively extended the reach of empathy from families to tribes to nation-states, and now to all humanity, and even to other animals and earth (environment). Empathy can be a potent force to alleviate global conflicts. In other ways, overall societal wisdom can be seen in reduced numbers of national invasions, genocides, dictatorships, and droughts, along with a notable increase in democratic movements,

international disaster relief efforts, social welfare for poor and disabled people across the globe, fight for women's and children's rights, donations of drugs to treat AIDS, as well as functioning of bodies such as the United Nations, the World Health Organization, the International Court, and the International Monetary Fund. A recent fire in Bangladesh that killed hundreds of garment factory workers elicited tremendous international response ranging from financial and other material aid to forceful demands for increasing protection and salaries of factory workers in that country (even though the result would be greater costs for garments in importing countries). This is not to assert that the whole world has become one big, caring, and happy family, but rather to highlight the progressive adoption of concern for the masses well beyond the national boundaries. Obviously we have long ways to go before there is equality and opportunity for all, but at least the value system is gradually changing. Most people would agree that today's societies reflect the components of individual wisdom (rational decision making, prosocial behaviors such as compassion and empathy, emotional regulation, self-reflection, tolerance for diverse value systems, and openness to new experiences) to a far greater extent than the societies of the dark ages.

The relationship between societal and individual wisdom is unclear. On one hand, the two types of wisdom may grow parallel – i.e., a mutually enhancing relationship between societal wisdom and individual wisdom. It might be conjectured that caring societies would foster personal wisdom among their citizens of all ages, while wise citizenry would, by definition, be essential for having a wise society. Analogous to a wise individual's behavior (individual wisdom) that promotes successful aging, a feature of a "wise society" would be one that teaches, motivates, and incentives its citizens to adopt positive, brain- and heart-health promoting behaviors. On the other hand, greater level of societal wisdom may reduce the need for the individual wisdom to survive and thrive in later life. In support of the second possibility, protective environments markedly reduce the risk of mortality from unnatural and avoidable causes such as predators, and such protection may also reduce the need for individual wisdom

to survive. Evidence for a lack of need for increase in personal wisdom with age in protective environments is provided by recent work of Januchowski-Hartley (2013). These investigators examined adaptive behaviors of fish, and showed that the fish which lived in the safety of a reserve were less vigilant than those living outside the protected area, and that the former ones brought their less-vigilant behavior with them when they wandered across a reserve boundary. The fish from the reserves also tended to be older (because, with protection, they could live to an older age) - by being in a reserve, they were not exposed to the dangers that the other fish were, so they did not have to adapt their behaviors to those dangers. Therefore, one could argue that a more protective society makes it less critical for individual wisdom to increase with age in order to promote longevity.

To our knowledge, this concept of societal wisdom is a new one, and has not been studied. Further research is clearly warranted to examine its validity.

(C) WELL-BEING IN SERIOUSLY MENTALLY ILL INDIVIDUALS

There is a dearth of studies of well-being and wisdom in older people with serious mental illnesses such as schizophrenia. Although schizophrenia is generally thought to be a non-remitting illness, we have found that the paradox of aging seems to hold true for community-dwelling people with schizophrenia too. Thus, while their physical health declines with age, older adults with schizophrenia tend to have better psychosocial functioning, including better medication adherence and self-rated mental health, and lower propensity for substance abuse and psychotic relapse than younger adults (Folsom et al., 2009; Jeste, Wolkowitz, & Palmer, 2011). There is an obvious possibility of survivor bias as the sickest patients with schizophrenia may die young as a result of increased mortality from suicide, substance use, or medical illnesses. Nonetheless, happiness in the presence of psychopathology in advanced age, what Saks (2007) calls “wellness within illness”, is an important new area of investigation.

Recovery or sustained remission of schizophrenia in later life has been reported in a variable proportion of older patients by several investigators (Auslander & Jeste, 2004; Bleuler, 1974; Harding, Brooks, Ashikaga, Strauss, & Breier, 1987; Vaillant, 1978a; Vaillant, 1978b). Predictors of this positive outcome include psychosocial support, acute onset, a good premorbid adjustment (especially nonschizoid personality traits, good work history, and marriage), and early initiation of treatment. Many studies have demonstrated the value of psychosocial / behavioral interventions for individuals with schizophrenia. Recent work shows that such treatments have neurobiological effects (e.g., increase in gray matter in specific regions of the brain), reflecting neuroplasticity in adult life even in the face of a serious mental illness (Eack et al., 2010). Although there have been no formal studies of wisdom in this population, people with schizophrenia seem to develop helpful behaviors, suggestive of some components of wisdom, in later years. Unpublished data in our cohort of outpatients with schizophrenia suggest that many patients obtain scores on a scale of wisdom that are comparable to those of healthy subjects.

There are numerous individuals who have suffered from life-long mental illnesses, yet managed to have outstanding lives of courage, dignity, and contribution to the society in their older years. Prominent examples include William Carlos Williams, a pediatrician who had several episodes of major depression throughout his life since adolescence, but wrote Pulitzer Prize-winning poetry after age 50 (Evans & Jeste, 2004), and John Nash, the Nobel Laureate who suffered from schizophrenia since early 20s (Nasar, 1998).

Unfortunately, there is a gap of nearly 20 years in the average lifespans of people with schizophrenia and the population at large (Saha, Chant, & McGrath, 2007; Tiihonen et al., 2009). Furthermore, the increase in longevity of the general population noted during the past several decades has not involved people with schizophrenia (Tiihonen et al., 2009). The primary reason appears to be a lack of improvement in overall healthcare for persons with serious mental illnesses, who continue to be mostly poor, uninsured, and without access to quality care.

An important contributor to this sad state of affairs is persistent stigma against mental illness. In other words, although the societies are becoming wiser and compassionate toward many downtrodden groups, some segments of the society are still left out, especially seriously mentally ill individuals. There is a critical need to enhance societal wisdom in this arena.

Recommendations

The relationship of individual and societal wisdom to aging, well-being, and mental illness has important implications for both research and policy. Below we list a few topics that warrant special attention.

(1) Why are there discrepant findings with respect to age-associated changes in different components of individual wisdom? This issue may have relevance to understanding potentially modifiable domains of individual wisdom.

(2) Is the improvement in social decision making observed in later life a result of trained pattern recognition and enhanced procedural memory? Such knowledge would help in the development of interventions to enhance cognitive aspects of wisdom.

(3) What measures (if any) at individual and social level may help delay, if not prevent, dementing illnesses? Such research would have obvious public health significance.

(4) Would choosing brain-health-promoting behaviors buttress resilience to depression in the face of pain (physical and psychosocial) and disability in people over age 85? That is the fastest growing segment of the population.

(5) What factors account for differences in the trajectory of well-being across the lifespan, with several, but not all, of the recent studies demonstrating a U-shaped curve? This information would have implications not only for healthcare but also for social science and economics, given that many researchers now consider well-being and happiness as important indicators of a nation's standing, on par with the gross domestic product (Di Tella, MacCulloch, & Oswald, 2003).

(6) The validity of the concept of societal wisdom should be assessed empirically. We believe there are several potentially testable hypotheses in this arena. For example, the reported increase in well-being with age among great apes (Weiss et al., 2012) suggests a possible biological basis for increased well-being in older humans. There is also some evidence for a lack of need for increase in personal wisdom with age in protective environments (Januchowski-Hartley, Graham, Cinner, & Russ, 2013). Therefore, one may hypothesize that greater individual wisdom is not as essential to ensure longevity in a protective society as it is in less compassionate cultures.

(7) Studies of wisdom and well-being are warranted in people with major mental illnesses. There is a need for developing models of health care that promote brain health in the seriously and persistently mentally ill persons. Major mental illnesses demonstrably increase the risk for early mortality and shortened life expectancy, probably through their direct “toxic” effects on the brain as well as by interfering with access to primary health care services. While there has been a recent focus on integrating depression care management into primary care (e.g., the IMPACT study (Unutzer et al., 2002)), little is known about how to best integrate primary care medicine into mental health services for the chronically mentally ill. Arguably, a wise society should find ways of doing this.

(8) Psychosocial and behavioral treatments, and in near future, biological interventions, to enhance individual wisdom should be developed and tested across age groups and in different patient populations.

(9) The link and the synergy between individually-nurtured and socially-inculcated wisdom could be strengthened. Thus, the potential benefit accruing from the mutual reinforcement of individual and societal wisdom, as enacted in the behaviors that promote brain health, should be evaluated. Hypotheses can be construed to set the stage for further research into wise, brain- and heart-health-promoting behaviors (on the part of individuals) and wise, brain- and heart-health-promoting policies (on the part of societies).

(10) As noted above, the general increase in longevity observed during the last several decades has escaped people with serious mental illnesses such as schizophrenia (Tiihonen et al., 2009). A likely reason is the persistent stigma against mental illness, such that modern societies have failed to implement true mental healthcare parity. A sustained international campaign for destigmatization of psychiatric disorders is needed to increase societal compassion for this disenfranchised segment of our society (Clark et al., 2013; Cummings, Lucas, & Druss, 2013; Henderson, Evans-Lacko, & Thornicroft, 2013). A society is not wise unless and until it provides the same quality of care to its neediest groups as it does to the most privileged ones.

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