

Table 1. Socio-demographic characteristics and bivariate distribution of individual level risk factors

	2007 N (%)	2009 N (%)	2011 N (%)	2013 N (%)	Chi Square Statistic	N (%)	Probability level	N (%)
Male	108 (90.8)	72 (83.7)	96 (82.1)	106 (90.6)	6.18		NS	
Minority	78 (65.5)	66 (76.7)	81 (69.2)	86 (73.5)	3.6		NS	
Part of family	16 (13.4)	10 (11.8)	25 (21.4)	28 (24.3)	7.9		0.048	
Employed	29 (24.6)	23 (27.1)	10 (8.5)	18 (15.5)	15.4		0.001	
Chronic Homeless	56 (47.1)	61 (70.9)	72 (61.5)	63 (54.3)	12.9		0.005	
Veteran	42 (35.3)	27 (31.8)	29 (24.8)	26 (22.4)	6.0		NS	
Dom Violence	7 (5.9)	11 (12.9)	14 (12.0)	13 (11.2)	3.6		NS	
Dev Disability	8 (6.7)	7 (8.2)	7 (6.0)	9 (7.8)	0.490		NS	
Health Problems	51 (42.9)	37 (43.5)	28 (23.9)	40 (34.5)	12.1		0.007	
Serious Mental Ill	27 (22.7)	26 (30.6)	31 (26.5)	36 (31)	2.6		NS	
Alcohol abuse	42 (35.3)	35 (40.7)	39 (33.3)	45 (38.8)	1.5		NS	
Drug abuse	46 (38.7)	34 (39.5)	34 (29.1)	37 (31.9)	3.8		NS	

NS = Not significant.

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More Than Just Better Physical Health: Can Integrative Medicine Increase Sagacity in Older Adults?

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Introduction: Integrative Medicine (IM) is an approach to healthcare which focuses upon many facets of health and evaluates physical, emotional, mental, social, spiritual, and environmental influences in order to optimize well-being. Integrative Medicine includes non-pharmacological or less invasive interventions when appropriate, thereby incorporating many complementary and alternative medicine treatments in practice (e.g., acupuncture, aromatherapy, massage, meditation, tai chi, yoga). Given the emphasis on holistic care, coupled with the possibility for fewer pharmacological treatments, the interest in IM for older adults is rising. But can IM lead to more than just better physical health? This study reports the characteristics of older adults who utilized IM services and highlights the basic health, well-being, and positive psychological traits differentiating between those adults who did and who did not engage in these practices.

Methods: This study describes the IM practices of 1,007 randomly-selected community dwelling adults aged 50 or older, who were cross-sectionally sampled in 2010 by the Successful Aging Evaluation (SAGE) study at the Stein Institute for Research on Aging in San Diego, California. These adults completed written questionnaires that inquired about basic health behaviors such as the number of prescription medications taken per day, hours of sleep per night, and frequency of sexual activity. Mental health and well-being measures were also collected to assess anxiety, happiness, morale, perceived stress, and satisfaction with life along with positive psychological traits such as compassion, optimism, and wisdom. Additionally, the adults were asked whether they had used any of 11 listed IM practices within the past year (e.g., acupuncture, massage, tai chi, yoga), and to provide a self-rating of their successful aging. Descriptive analyses, correlations, and inferential statistics measuring differences between those who did and did not engage in IM practices were conducted using SPSS 21 software.

Results: Of the 1,007 older adults in this study, 37% reported using at least one IM treatment in the past year. The most commonly reported treatments used were massage (13%), chiropractic care (12%), yoga (8%), tai chi (6%), and meditation or hypnosis (5%). Age was found to be significantly negatively correlated with the number of integrative medicine modalities used, with the highest rates of integrative medicine usage found among adults aged 50-59. Demographically, those who used IM treatments were significantly more likely to be female and married, although there was no significant difference in level of education, personal income, or race/ethnicity. With regard to basic health behaviors, those who used IM treatments reported taking fewer prescription medications per day, but did not differ significantly with respect to the hours of sleep per night or the frequency of sexual activity. The measures of mental health or well-being showed no significant differences, with the two groups reporting similar levels of anxiety, happiness, morale, perceived stress, and satisfaction with life. However, those who used IM treatments reported significantly higher self-ratings of successful aging, and scored higher on measures of compassion, optimism, and wisdom.

Conclusions: Similar to previous research, this study found that approximately one-third of community adults utilized IM treatments, with the most frequent utilizers being married, female, and between the ages of 50-59. In this sample, those who utilized IM treatments reported taking fewer medications per day and greater self-rated successful aging. Most interestingly, IM usage did not differentiate between adults' general mental health or well-being, but did lead to higher scores on measures of compassion, optimism, and wisdom. Given the cross-sectional nature of this study, any causal relationship between these positive psychological traits and IM usage is unclear. Perhaps these adults were drawn to IM because of their attainment of these underlying, and potentially long-standing, virtues. Regardless, this study leads to questions about the value of IM practices above and beyond basic health care. Is it possible to enhance older adults' health as well as their broader compassion, optimism, and wisdom through IM? Future studies can investigate these possibilities and gather more information about the higher-order benefits of integrative medicine.

This research was funded by: This poster was supported by the M-STREAM training grant (Grant #: NIMH R25 MH71544).

Poster Number: EI 62

Is Exercise in Early- and Mid-Adulthood Associated With Cognition in Mid-Life?

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Introduction: Alzheimer's disease (AD) represents a large public health burden with more than 25 million people affected worldwide. As populations in developing countries begin to experience an extended life expectancy, the global burden of dementia, especially AD, is expected to increase exponentially. Currently, the available pharmacologic treatment options for AD provide symptomatic relief and are not disease-modifying. Thus, there is an urgent need to identify modifiable factors that can delay the onset of cognitive symptoms and slow the rate of cognitive decline. It is well established that the pathophysiology of AD begins years, possibly decades, before the emergence of clinical symptoms. Furthermore, persons with mild cognitive impairment (MCI) are at a higher risk of developing dementia compared to persons without MCI. Thus, the identification of early cognitive changes among cognitively normal individuals is important for identifying individuals at higher risk of developing AD. Randomized clinical trials have demonstrated that physical exercise improves cognition. However, most studies have focused on an elderly cohort and on an acute exposure to exercise. Population-based studies that evaluate the impact of early and mid-life exercise on mid-life cognition are lacking. Exercise is a modifiable behavior and, thus, understanding the early effects of exercise on cognition may provide opportunities for the prevention of AD. The goal of the present study is to examine the effect of exercise in early and mid-life on cognition in mid-life.

Methods: We assessed the relationship between mid-life cognitive performance and exercise history during early-adulthood (age 30-45) and mid-life (age 50-69) in a cross-sectional cohort of 649 cognitively normal individuals, aged 50-69 years, participating in the population-based Mayo Clinic Study on Aging. Cognitive performance was measured using a brief computerized battery, CogState. The following CogState tests were administered: Detection (DET) - measuring simple reaction time, Identification (IDN) - measuring choice reaction time, One Card Learning (OCL) - measuring visual learning, One Back test (ONB) - measuring working memory and attention, and the Groton Maze Learning Test (GMLT) - measuring spatial working memory. Exercise history was obtained by self-report using questions adapted from two previously validated instruments: the 1985 National Health Interview Survey and the Minnesota Heart Survey Intensity Codes. The survey measured frequency (0-3 times per month, 1-4 times per week, or 5+ times per week) and the intensity (light, moderate, vigorous) of exercise. Multivariate linear regression analysis was used to assess the relationship between early- and mid-life exercise and performance on each cognitive test.

Results: Moderate, but not vigorous, exercise 1-4 times per week versus less during early-adulthood (age 30-45) and mid-life (age 50-69) was associated with significantly ($p < 0.05$) better performance on IDN, OCL, and ONB tasks. However, moderate exercise 5-7 times per week was not associated with better cognitive performance. While the effects of light exercise 1-4 times per week versus less showed fewer effects, participating in light physical activity one to four times per week, both acutely as well as long-term, showed beneficial effects in the cognitive domains of visual learning and memory. Vigorous exercise was not associated with an improved performance on the cognitive battery administered.

Conclusions: Physical exercise is a modifiable behavior and may present an opportunity to delay or prevent the onset of cognitive symptoms associated with AD. The present results suggest that exercise in both early- and mid-adulthood is beneficial and that only moderate increases in activity may be necessary to provide this desired benefit. Future longitudinal studies