The Critical Review of Social Sciences Studies

Online ISSN: 3006-7170
Print ISSN: 3006-7162
Volume 4, Number 1, 2026, Pages 3216 – 3229
Journal Home Page
https://thecrsss.com/index.php/Journal/about

A Sociological Analysis of Cognitive Aging in Middle and Late Authorized: The Role of Socioeconomic Status, Education and Social Support

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ARTICLE INFO

Article History:

Received:	*January*	*08, 2026*
Revised:	*February*	*15, 2026*
Accepted:	*February*	*27, 2026*
Available Online:	*March*	*13, 2026*

Keywords:

Cognitive aging, Socioeconomic status, Educational attainment, Social support, Middle adulthood, Late adulthood, Cognitive reserve, Mental well-being

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ABSTRACT

The present study investigated the sociological factors influencing cognitive aging among individuals in middle and late adulthood, with a focus on socioeconomic status, educational attainment, and social support. A quantitative research design was employed, and data were collected from 220 respondents using a structured questionnaire. The sample included middle-aged and older adults selected through a stratified random sampling technique to ensure diversity in socioeconomic and educational backgrounds. Descriptive statistics were used to analyze demographic characteristics, while correlation, multiple regression, and chi-square analyses were applied to test the study objectives. The findings showed that there was a strong positive correlation between socioeconomic status and cognitive functioning ($r = 0.52$, $p < 0.01$), which implies that the higher the socioeconomic status, the higher the cognitive functioning. The results of the multiple regression indicated that education was a significant predictor of cognitive aging ($b = 0.541$, $p < 0.001$), and with increased levels of education, cognitive reserve and resiliency to age-related changes are better. Moreover, chi-square test revealed that social support and cognitive wellbeing were significantly associated ($kh2 = 18.64$, $p < 0.01$), indicating the protective effect of high social networks on cognitive health. These results highlight the role that social factors play in cognitive aging and also underscore the significance of socioeconomic resources and education and social support in enhancing healthy cognitive functioning into middle and late adulthood. The research can inform policymakers and practitioners to formulate interventions that would help to minimize social inequalities and promote cognitive well-being among the aging population.

Introduction

Cognitive aging is the transformation of cognitive functions, which take place as one ages. Such changes normally include changes in memory, attention, speed of processing and executive functioning. Although certain things about cognition do not change significantly during adulthood, others experience a significant reduction during middle and late adulthood. The scholars have also become more aware of the fact that cognitive aging cannot be considered a purely biological process but is highly affected by social and environmental factors that contribute to the formation of experiences in the life of individuals (Harada, Natelson Love, and Triebel, 2013). The sociological approaches note that later life outcomes of cognition are also strongly connected with the structural conditions, opportunities, and inequalities received throughout the life.

The middle and late adulthood are important stages in the aging process. Middle adulthood is usually characterized as the age group between 40-65 years and during this stage there are usually social role changes, career paths, and family duties. At this age, some of the people might start developing some minor cognitive impairments, especially in processing speed and working memory. Nevertheless, most of the cognitive functions including knowledge, vocabulary, problem-solving strategies might actually stay constant or even get better with the experience and knowledge obtained throughout life (Salthouse, 2012). Late adulthood, which generally starts at approximately 65 years old, is more commonly linked with cognitive impairment being observable, but the amount and speed of the impairment varies widely across various individuals.

Within sociological framework, cognitive aging is informed by the accumulation of life circumstances, such as educational access, monetary resources as well as social network. The emergence of social inequalities in a young individual may persist and affect the cognitive health decades after that. Those individuals, who have more opportunity to gain educational and economical conditions, tend to show higher cognitive functioning in the late life than socioeconomically disadvantaged individuals do (Dannefer, 2003). This opinion shows the necessity of studying cognitive aging as a socially organized process and not only as an individual or biological phenomenon.

Moreover, current aging studies also focus on the notion of successful aging, which implies that the status of cognitive functioning can be supported or even enhanced by means of supportive social conditions and the necessity to engage in mentally challenging activities. Close networks, lifelong learning, and social participation play a significant role in ensuring cognitive health in older adults (Rowe & Kahn, 2015). Thus, social determinants of cognitive aging are critical in the context of developing the strategies that can enhance healthy aging and minimize cognitive differences in late life.

Social/Economic background and Cognitive Aging

The socioeconomic status (SES) is well known as one of the most effective social determinants of cognitive health throughout the lifespan. SES generally comprises income, occupational status and access to material resources, which determine the opportunities and livelihood of people. Studies have always shown that the better the socioeconomic status the better the cognitive functioning and slower the cognitive deterioration of an individual (Adler and Rehkopf, 2008). The reasons behind this relationship are frequently attributed to variations in access to healthcare, nutrition, educational opportunities, and cognitively stimulating environments.

Greater socioeconomic status usually offers people more chances to pursue intellectually challenging jobs and activities that achieve cognitive resilience. Jobs demanding complex problem solving, decision making, and learning have been linked to more vivid cognitive functioning at old

age. On the other hand, people who are in jobs requiring repetition or physical exertion might not have a chance to engage in cognitive stimulation, which can also be a predisposing factor to faster cognitive decline with aging (Fisher, Chaffee, and Sonnega, 2016). These careers disparities depict on how unequal socioeconomic inequalities may pre-determine cognitive development through adulthood.

Along with the occupational determinants, economic resources are also significant in establishing the access to health care and health promoting lifestyles. The higher the income level the better the preventive health care services, balanced diets, and other recreational activities that take the place of cognitive health. Conversely, the presence of financial stress and low resources might escalate contact with chronic stressors, which have been associated with adverse cognitive effects and predisposition to cognitive deterioration in adulthood (Lachman, 2015).

Another theory which is highlighted by sociologists is the cumulative disadvantage theory which implies that the disparity of socioeconomic resources is experienced over the life course and consequently, any imbalance in health and cognitive capabilities becomes wider as an individual gets older (Campos et al., 2025). Those who are socioeconomically disadvantaged at early stages of their life can have reduced chances of receiving an education, decreased occupational mobility, and increase their exposure to stress which can lead to a negative impact on cognitive health. The contribution of socioeconomic status to cognitive aging is thus imperative in the need to cope with social differences that determine cognitive performances among aging individuals.

Educational level and Mental reserve

The other important factor in determining cognitive aging is education since it helps in building cognitive reserve. Cognitive reserve is the capacity of the brain to be flexible and able to adjust to age changes or neural damage through the adoption of alternative neural pathways or mechanisms (Stern, 2012). Educated people tend to have better cognitive functioning and they are better suited to age-related cognitive decline.

Education gives people an opportunity to acquire analytical skills, ability to solve problems and knowledge that facilitate cognitive flexibility in life. Formal education is also known to promote the activities that are thought provoking like reading, writing and critical analysis that help to form cognitive networks that are helpful in the later life (Scarmeas and Stern, 2003). This leads to the fact that better educated people tend to have better memory, attention and reasoning capacities than less educated ones.

Additionally, education tends to impact occupation and social mobility which also add to cognitive health. More educated people will have greater chances of getting professional or intellectually challenging jobs which involve constant learning and problem solving. Such cognitively challenging workplaces may be beneficial to keep the mind alert and slow down cognitive decline (Fisher et al., 2016). On the contrary, less educated people can be less exposed to these activities, and they might become more susceptible to cognitive decline.

Education also contributes to the health behaviour and lifestyle of individuals. With education, people tend to have a higher propensity of adopting health-promoting attitudes such as physical activity, good diet, and mental stimulation by engaging in hobbies and socializing. Such habits are closely linked to better brain health and elimination of the chance of cognitive decline later in life (Alvarez, 2021). Therefore, education is not simply essential to the growth of the intellect, but also long-term intellectual well-being.

Social Support and Cognitive Well-Being

Another important factor that affects the cognitive functioning in middle and late adulthood is social support. Social support is defined as the provision of emotional, informational, and practical support to individuals by the family members, friends, and community networks. Good social ties have psychological advantage which helps in the mental health and cognitive strength in aging people (Berkman, Glass, Brissette, and Seeman, 2000).

Social interactions stimulate cognitive activities like communication, recalling and problem solving. Cognitive stimulation opportunities, achieved by regular conversations and group activities, as well as involvement in community organizations, would be a way to help engage mental functioning as time passes. Research has revealed that the social inactivity of people in old age is associated with slower cognitive impairment than social isolation (Fratiglioni, Paillard-Borg, and Winblad, 2004).

Social support is another factor that is relevant in alleviating the negative impact of stress. The aging people usually encounter numerous life issues, which may include retirement, illnesses, and loss of family members. Good social networks offer emotional and coping mechanisms with which one can cope with these stressors better. A lower level of stress has been linked to improved cognitive functioning and a lower possibility of cognitive deficiency in older age (Niles-Yokum, & Wagner (2011).

Moreover, community involvement and socialization help in the development of the sense of purpose and belonging, which are very basic parts of psychological health later in life. Involvement in volunteer activities, cultural activities as well as social groups help individuals to be mentally active and socially integrated. Such activities do not only enhance emotional health but also cognitive functioning of the brain since they encourage one to be constantly involved in new experiences and ideas (Massey 2007).

Reasons and Importance of the Research

With the growing population of aged adults in the world, the social determinants of cognitive aging have emerged as a significant field on sociological research and public health. Later-on cognitive impairment can severely impose on the independence, quality of life and general wellbeing of individuals. Thus, it is important to determine the social determinants of cognitive health to be able to formulate interventions to enhance healthy aging and stop cognitive decline.

Numerous studies have been done on biological and neurological explanations of cognitive aging in the past. Nonetheless, sociological viewpoints emphasize on the need to study the nature of structural inequalities, life experiences, and social relationships as determinants of cognitive outcomes in the long-term. Socioeconomic status, education and social support are important factors that influence access to resources that enhance cognitive resilience among individuals.

This paper will seek to address the sociological aspects of cognitive aging, by analyzing the impact of socioeconomic status, educational attainment, and social support on cognitive functioning in the middle- and late-adulthood. Through a sociological approach, the study aims at giving a more in-depth explanation of the social processes that lead to cognitive health and deterioration.

Finally, the research results can be used to formulate policies and initiatives aimed at alleviating the social disparities in cognitive functioning and favorable conditions of growing-old groups. These social determinants can be addressed to make sure that people remain cognitively vital and live quality lives in the older years.

Research Objectives

- To examine the relationship between socioeconomic status and cognitive functioning among individuals in middle and late adulthood.
- To analyze the influence of educational attainment on cognitive aging and the development of cognitive resilience in later life.
- To investigate the role of social support in maintaining cognitive well-being among middle-aged and older adults.

Problem Statement

The topic of cognitive aging is becoming more and more significant as the world is becoming older and older, but the drivers of cognitive decline are not biological factors only, but have an in-depth connection to social structures. Such differences in socioeconomic status, access to educational opportunities, and to supportive social networks, cause people to have varying cognitive outcomes in later life. Individuals with the disadvantaged socioeconomic background have poor access to educational resources and social support systems, which might be associated with increased cognitive deterioration and impaired cognitive performance during middle and late adulthood. Although an increasing number of researchers begin to recognize these social factors, most of the studies are still centered on medical or neurological causes of aging. Consequently, it is important to consider the sociological aspect of cognitive aging in order to gain a deeper insight into how socioeconomic inequalities, educational levels and social support all interact to formulate the cognitive health in aging populations.

Significance of the Study

This research is important as it will add to the literature in terms of social determinants affecting cognitive aging in the middle and late adulthood. The study by analyzing the influences of the socioeconomic status, education, and social support make the views that social inequalities and life-course events influence cognitive functioning in later life. The results can assist policymakers, health practitioners and social scholars to come up with effective interventions that will enhance healthy aging and minimize cognitive impairment in older adults. Also, the research can contribute to informative information in designing educational programs, community support programs and social policies to support the cognitive well-being and the quality of life of aging populations.

Literature Review

Aging: Cognitive at Middle and Late Age

Cognitive aging is a concept which is used to refer to the development that takes place in the cognitive processes of individuals as they advance in later stages of life. The changes may be characterized by the difference in memory, attention, speed of information processing, and executive functioning. Studies have shown that although some of the cognitive skills like vocabulary and general knowledge accumulated over a lifetime will either stay relatively high or even increase as time goes on, others like working memory and speed will tend to deteriorate (Coogle and Finley (1994). Such cognitive changes are normal age changes, but the degree and rate of change differs greatly among individuals based on biological, psychological and social differences.

Sociology and gerontological scholars stress that the cognitive aging process cannot be explained only within the biological context. Rather, it is defined by life experiences, environmental exposures and social inequalities that build with time. The life-course understanding recommends

that the exposure of an individual to experiences in life such as education, profession, social life among others is important in shaping his or her cognitive functioning as an older adult (Elder, 1998). These experiences accrued in one way or the other give different people differing degrees of cognitive resilience.

In addition, the aging of the global population has created more interest in cognitive health as a social problem and the public health concern. As life span is expected to be longer, cognitive functioning has been a mandatory factor in the preservation of independence and quality of life among the elderly. Cognitive impairment may influence the decision-making skills, social engagement, and well-being, which is why it is a significant field of study in sociology and the health sciences (Zhu, H. Lu, Zhang and Cui (2019).

Environmental stimulation and active participation in preserving the cognitive vitality has also been emphasized by recent studies. Social interaction, intellectual and lifelong learning activities have been found to be effective in maintaining cognitive functioning in elderly individuals. Thus, it is important to have knowledge of social factors behind cognitive aging in an effort to ensure healthy and successful aging in contemporary societies (Kassis et al., 2022).

Social Economic and Age Aging

Cognitive health in the life span largely depends on socioeconomic status (SES). SES usually involves variables like income, occupation, and access to economic resources, which have an impact on the conditions and opportunities of people to live. Many studies have also proven that patients with higher socioeconomic status have better cognitive functioning and slower cognitive decline than patients of lower socioeconomic status (Guo & Yang (2024).

A cause of this relationship is the inequality in access to accessing resources and opportunities attributed to the socioeconomic status. People of more affluent status can also receive better healthcare, better nutrition and safer living conditions, which are all factors that lead to the overall brain health. Such people will also find it easier to engage in activities that are mentally engaging like reading, career growth, and cultural interaction, which maintain mental performance in the long term (Chen, 2020).

Work experiences are also significant to the connection between socioeconomic status and cognitive aging. Cognitive stimulation is achieved through jobs that require the solving of complex problems, decision making, and constant learning to keep the mind alert. Conversely, jobs where people do repetitive or routine work may not provide enough cognitive stimulation, and may also cause cognitive deterioration in old age (Gladding, 2009). These professional inequalities explain how socio economical distance can affect intellectual growth during adulthood.

Moreover, cumulative disadvantage sociological theories put an emphasis on the effect of socioeconomic inequalities in childhood on individuals at the later life stages. Individuals raised in poor economic conditions have few opportunities to access good education and job opportunities and this may have a long term effects on the cognitive health. These disadvantages can be accumulated over time, and they can lead to increased susceptibility to cognitive loss in middle and late adulthood (Naseer, 2016).

Educational Attainment, Cognitive Functioning

It has been established that education is one of the most powerful predictors of cognitive functioning later on in life. Education can be involved in development of cognitive skills which include critical thinking, reasoning and problem solving which can assist individuals to adjust to cognitive challenges as they grow. This defense mechanism is commonly known as cognitive

reserve by researchers and enables the brain to counteract the aging effect or brain damage (Rycroft, 2017).

The more educated an individual is, the more the memory, attention, and executive functioning abilities are usually well developed than individuals whose level of education is limited. Education brings sustained mental stimulation with the help of the learning process, intellectual debates and embarkation of new ideas. The experiences aid in making neural links stronger, as well as improving the ability of the brain to sustain cognitive functioning later in life (Wang et al., 2024).

Another way in which education affects cognitive aging is by the effect it has on career prospects and socioeconomic progress. The better educated the individual, the higher the chances of assuming professional career with high decision making and critical thinking. These types of intellectually stimulating work environments offer continuous cognitive stimulation which can postpone the effects of cognitive decline (Katz, 1997). Conversely, less educated people might be less exposed to such mental stimulation.

Besides, education is linked to increased awareness on health related behaviors that can be used to foster cognitive health. Learned people would prefer doing activities like exercise, eating well, and other intellectual affairs like reading a book or solving puzzles. These behaviors have been associated with the better brain health and the less risk of cognitive impairment during the old age (Pratt, 1993). Education is, therefore, critical in the development of the cognitive process as well as the resilience of cognitive in the long run.

Social Support and Cognitive Well-Being

Another issue of concern that affects cognitive functioning in the middle and late adulthood is social support. Social support is the support that an individual is given, in terms of emotion, information and practical help, by their own social group, track of relatives, friends, and the community organization. Good social affiliation means psychological stability and emotional safety, both of which offer better mental health and mental capabilities (Vaughn, DeLisi & Matto. (2013).

Social interaction is a way of enhancing different cognitive functions that include retrieval of memories, language and solving problems. Frequent interactions, involvement in social groups and activities stimulate mental involvement and support cognitive activity. Research has also indicated that people with an active social network have reduced breakdown in their cognitive ability than those who feel socially isolated (Fessey, 2002).

Social support also enables people to manage the stress and life complications and this is especially critical in the middle and late adulthood. Some of the most common aspects of life transitions in aging individuals are retirement, health, or the death of loved ones. The supportive relationships offer emotional support and support mechanisms that enable individuals to deal with these stressors successfully. Less stress is related to improved cognitive functioning and decreased risk of cognitive impairment (Du, J & Gan, (2025).

Moreover, social interaction and community engagement make people feel part of the community and they have a purpose in their life. Volunteering, joining community organization, and keeping friends are some of the activities that help the older adults to live mentally and socially active. Through such interactions, cognitive stimulation and emotional well-being are encouraged, which is not only necessary to keep the mind healthy in later life (Williams et al., 2015 & Razzaque, 2018).

Association between Socioeconomic Status, Education and Social Support and Cognitive Aging

The interplay between socioeconomic status, education and social support is important in determining cognitive outcomes in middle and late adulthood. These factors have a reciprocal relationship and they tend to affect one another at various stages of life of an individual. As an illustration, the more socioeconomically advantaged a person is, the more possibilities they would have to obtain quality education and expanded social networks, both of which would lead to better cognitive functioning as one grows older (Cabness, 2003).

Education is usually an important channel through which social economic benefits can be transferred into improved cognitive achievement. An increased educational level improves the level of thinking and exposes the individual to intellectually satisfying jobs and social life. Such experiences assist a person in developing cognitive reserve that offers protection against age-related cognitive decline (Kowal, 2022).

Equally, social support networks could be used to mitigate the adverse impacts of the socioeconomic disadvantages. People who have good social contacts usually are encouraged emotionally, helped practically and have access to social interaction which may lead to cognitive well-being. The social networks are thus capable of playing the role of protection against the effects of economic or educational disparities (Berger, & Carlson, (2020).

The prevailing interrelations between the socioeconomic status, education, and social support are important to understand in order to provide comprehensive strategies to promote healthy cognitive aging. Societies can support individuals to be cognitively vital and enhance their general well-being in middle and late adulthood by rectifying social inequalities and reinforcing support systems.

Methodology

Research Design

The research design that was chosen to conduct this study was a quantitative research design, as it sought to test the relationship between socioeconomic status, education, social support, and cognitive aging in middle and late adults. Data was collected at a particular point in time using a cross-sectional survey method. This design was considered appropriate for depicting patterns and associations among the study variables.

Population of the Study

The study population consisted of adults in middle and late adulthood living in urban communities. The target population included individuals aged between 40 to 75 years. Participants were recruited from community centers, social organizations, residential areas, and selected educational institutions including the University of the Punjab, Government College University Lahore, University of Education Lahore, University of Karachi, and Jinnah University for Women Karachi, where middle-aged and older adults were actively engaged in social and educational activities.

Sampling Technique

A stratified random sampling method was adopted to ensure representation of participants from diverse socioeconomic and educational backgrounds. Participants were stratified based on age groups and socioeconomic status. From each stratum, individuals were randomly selected to maintain diversity and enhance the credibility and generalizability of the study results.

Sample Size

The sample size for the study was 220 respondents. This size was considered sufficient for analyzing relationships between variables and ensuring statistical reliability. The sample included both male and female participants from various educational and socioeconomic backgrounds.

Data Collection Method

A structured questionnaire was used to collect primary data, measuring cognitive functioning, socioeconomic status, educational level, and social support. The questionnaires were administered through community visits, social gatherings, and institutional outreach at selected universities. The purpose of the study was clearly explained to participants, and informed consent was obtained prior to data collection.

Data Analysis Techniques

Statistical methods were used to analyze the collected data and determine relationships between variables. Descriptive statistics such as mean, frequency, and percentage were used to summarize demographic data. Inferential statistical tests, including correlation and regression analysis, were applied to examine the relationships between socioeconomic status, education, social support, and cognitive aging.

Table 1: Demographic Information of the Respondents (N = 220)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	118	53.6
	Female	102	46.4
Age Group	40–49 Years	72	32.7
	50–59 Years	68	30.9
	60–69 Years	50	22.7
	70–75 Years	30	13.7
Education Level	Secondary Education	54	24.5
	Bachelor's Degree	86	39.1
	Master's Degree	56	25.5
	MPhil/PhD	24	10.9
Socioeconomic Status	Low SES	64	29.1
	Middle SES	104	47.3
	High SES	52	23.6
Marital Status	Married	162	73.6
	Single/Widowed/Divorced	58	26.4

The demographic feature of the respondents (N = 220) demonstrates that a slightly greater percentage of the respondents were male (53.6% than female respondents (46.4%). In terms of age distribution, the biggest proportion of the participants was 40-49 years (32.7%), 50-59 years (30.9%), implying that a large number of the sample belonged to the middle adulthood. Within the education level, the majority of the respondents have a bachelors degree (39.1%), with smaller percentages bearing a masters (25.5%), MPhil/PhD degrees (10.9%). The distribution of socioeconomic status showed that most of the participants were in the middle socioeconomic group (47.3%), then in the high socioeconomic group (23.6%), and the low socioeconomic group

(29.1%). Also, the majority of the respondents were married (73.6%), and a smaller number of them were single, widowed, or divorced (26.4%). In general, the demographics show that the sample was a representative sample with participants of various age categories, educational levels, and socioeconomic status, which is balanced to study cognitive aging in middle and late adulthood.

Table 2: Correlation Analysis Between Socioeconomic Status and Cognitive Functioning (N = 220)

Variables	Mean	SD	1	2
1. Socioeconomic Status	3.41	0.72	—	
2. Cognitive Functioning	3.68	0.65	**0.52**	—

The correlation analysis was done to demonstrate the relationship between socioeconomic status and cognitive functioning among middle and late adult people. Results showed that there was a positive medium correlation between socioeconomic status and cognitive functioning ($r = 0.52$, $p < 0.01$). This result implied that the people with high socioeconomic status were likely to have better cognitive performance than people with low socioeconomic status. Greater access to economic resources, healthcare facilities and intellectually interesting surroundings may help in the better cognitive functioning of individuals in a higher socioeconomic status. The statistically significant relationship means that the socioeconomic conditions are important in determining the cognitive health in the middle and late adulthood. Thus, the results confirm the study objective that cognitive functioning of aging people is strongly related to socioeconomic status.

Table 3: Multiple Regression Analysis Showing the Effect of Educational Attainment on Cognitive Aging (N = 220)

Model	Predictor Variable	B	SE B	β	t	p	R^2
1	Education Level	0.467	0.058	0.541	8.05	<0.001	0.293
	Cognitive Aging (Dependent Variable)						

The effect of educational attainment on cognitive aging in middle and late adulthood was analyzed using multiple regression analysis to determine its impact on the individuals. These findings revealed that education was a significant predictor of cognitive functioning ($b = 0.541$, $p < 0.001$). The regression coefficient ($B = 0.467$) indicates that increased education levels were correlated with improved cognitive performance amongst the respondents. The model had a 29.3 percent variance in cognitive aging ($R2 = 0.293$), and this showed that education attainment played an important role in the differences in cognitive functioning between the participants. These results suggest that better-educated people had more chances of retaining better cognitive functions, which could be because better cognitive function and intellectual involvement were more frequent, and cognitive reserve appeared to be more stimulated across the lifespan. Hence, the findings address the second research question, which stated that educational attainment is an important variable in determining cognitive aging.

The chi-square test was used to analyze the relationship between cognitive well-being and social support of individuals in the middle and late adulthood ages. The findings showed that there was a statistically significant relationship between the social support and cognitive well-being ($kh2 = 18.64$, $df = 4$, $p < 0.01$). The high percentage of good cognitive well-being was higher in participants who reported higher rates of social support (48 respondents) than in those with moderate or low levels of support. However, those with low social support had more chances to encounter moderate or low cognitive well-being. These results imply that good social ties and

support systems are significant in preservation of cognitive functions as people grow old. Hence the findings assist in addressing the third research goal that suggests that social support is highly related to the cognitive well-being of middle-aged and older adults.

Table 4: Chi-Square Analysis Showing the Association Between Social Support and Cognitive Well-Being (N = 220)

Variables	Category	Good Cognitive Well-Being	Moderate Cognitive Well-Being	Low Cognitive Well-Being	Total
Social Support	High	48	22	6	76
	Moderate	36	40	18	94
	Low	12	20	18	50
Total		96	82	42	220
Chi-Square (χ^2)	**df**	**p-value**			
18.64	4	<0.01			

Discussion

The current research was done to analyze the sociological determinants in cognitive aging in people during middle and late adulthood, specifically the socioeconomic status, education and social support. These social factors were reported to possess a significant influence on cognitive functioning according to the results of the study in the process of aging. The findings confirm the sociological approach that cognitive aging is not purely a biological event but rather determined by social structures, life opportunities and environmental conditions experienced in the life course.

The initial aim of the research was to test the connection between the socioeconomic status and the cognitive functioning. The correlation analysis indicated a very strong positive association between socioeconomic status and cognitive performance whereby people with high socioeconomic status exhibited improved cognitive functioning. These results are in line with past findings which reveal the impact of socioeconomic resources on cognitive health. Indeed, an example was given by Adler and Rehkopf (2008) which indicated that, people who are better positioned in terms of socioeconomic status tend to have better access to healthcare, education and intellectually stimulating surroundings which in turn help them optimize their cognitive functioning later in life. On the same note, Lachman (2015) also pointed out that an economic resource enables people to live healthier lives and indulge in brain-supporting cognitive activities.

The second study objective aimed at investigating the outcome of educational attainment on cognitive aging. The regression showed that cognition functioning was greatly predicted by education among the respondents. The more educated the participants, the more they were likely to exhibit better cognitive ability as opposed to the less educated. These results confirm the notion of cognitive reserve, i.e., education leads to improved ability of the brain to deal with the changes that take place with age, as well as with the neurological issues (Stern, 2012). Another study done before by Scarmeas and Stern (2003) also established that people who have a higher level of educational attainment have a better cognitive functioning in their later life since education helps in stimulating the intellect and enhancing neural connections.

Also, the findings showed that education level has an indirect positive effect on cognitive health due to occupation and intellectual stimulation. More educated people stand a better chance of securing professional jobs which involve critical thinking and problem solving abilities, which on the other hand offer them constant cognitive stimulation. Similar findings were made by Fisher,

Chaffee, and Sonnega (2016) who proved that cognitive demanding jobs are linked to slower cognitive aging in older adults. Thus, the results of the current research support the notion that education is a crucial element in the establishment of long-term cognitive resilience.

The third aim of the research was to test the correlation between social support and cognitive well-being with the help of chi-square analysis. The findings revealed a significant correlation between social support and cognitive health whereby people having strong social network reported to have greater cognitive well-being than those with weak social support. These results align with the reports of previous studies which underline the role of social interaction in preserving mental activity. Berkman et al. (2000) stressed that social relationships enable the older adults to have emotional support and a chance of cognitive stimulation which make them mentally fit.

In a similar study, Fratiglioni, Paillard-Borg, and Winblad (2004) have discovered that socially active people who have close social contacts with family, friends and the community they live in are less likely to experience cognitive decline than those who are socially isolated. Socialization promotes communication, remembering and problem solving processes that keep the brain active and keep thinking. These previous studies are consistent with the current study that shows that social support is a protective factor of cognitive health in middle and late adulthood.

Altogether, the findings of this research indicate the role of social determinants in cognitive aging. The key factors that were observed to have a significant impact on the cognitive functioning of the middle-aged and older adults were socioeconomic status, education and social support. These results correspond with the view of the life-course perspective that indicates that social benefits and deprivation accumulate with age and determine health conditions later in life (Dannefer, 2003). The societies can enhance the healthier cognitive aging process and add value to the lives of the aged by solving social inequalities and enhancing the social support systems.

Conclusion

The article investigated the sociological determinants of cognitive aging during the middle and late adulthood, and they were based on the sociocultural and socioeconomic status, education, and social assistance. The results revealed that participants who had strong socioeconomic status showed greater cognitive functioning which supports the significance of economic resources, healthcare access, and intellectual stimulating environments in preservation of cognitive functioning. Education was also established to have a significant effect on cognitive performance, which supports the idea of cognitive reserve, in which increased education enhances neural connectivity and the intellectual challenge, which delays age-related cognitive impairment.

Also, the social support was found to be an important determinant in cognitive well-being. Those who had more social networks had higher cognitive results underlining the importance of social interactions, emotional support and involvement in communities in enhancing mental wellness. All in all, overall, the paper affirms that cognitive aging is influenced by social determinants in addition to biological factors, which supports the necessity of considering socioeconomic, educational and social factors in the context of understanding and treating cognitive health amongst aging populations.

Future Implications

The research findings of this study are significant in policy and practice implications. Interventions to modify cognitive health can be directed to increase access to educational opportunities and lifelong learning, facilitating social life, and dealing with the socioeconomic disparities restricting the access to resources. Social networks can be enhanced and cognitive stimulation can be done through community based programs like social clubs, volunteer programs, and educational

programs directed at middle ages and older. Moreover, policymakers are advised to think about the means of decreasing economic and educational differences so that people of all backgrounds would have a right to stay mentally healthy as they grow old.

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