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Effect of socio-demographic factors and depression on quality of life among geriatric people in Faridabad city

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Abstract
This study aimed to investigate the relationship between socio-demographic variables, depression, and Quality of Life (QoL) in individuals aged 60 years and older. The research involved a sample of 98 elderly participants, including both males and females. The data for this study were collected through validated instruments, including the World Health Organization's WHOQOL-BREF, a short-form of the Geriatric Depression Scale (GDS-15), and various socio-demographic variables. Several statistical techniques, such as correlation coefficients and regression analysis, were employed to analyze the collected data. The findings of the study revealed several significant relationships. There was a strong relationship between depression and various socio-demographic variables, including marital status, education, chronic illness, income, and physical dependency. This suggests that these factors are closely linked to the presence and severity of depression in older adults. Regression analysis indicated that depression, along with certain socio-demographic variables like income, physical dependency, and age, significantly influenced the quality of life among older adults. This implies that these factors have a notable impact on an individual's overall well-being and satisfaction with life. Understanding these relationships between socio-demographic factors, depression, and QoL in older adults is valuable for healthcare professionals and policymakers. It can help in identifying at-risk individuals and developing targeted interventions to improve the mental and emotional well-being of older populations, ultimately enhancing their quality of life.

Keywords: Depression, quality of life, older people, socio-demographic, elderly, geriatric

Introduction
Ageing is often viewed as an ongoing process of human development. The geriatric population is typically defined as individuals aged 60 or 65 years and older. This phase is commonly seen as the culmination of a person's natural lifespan or the twilight years. During this stage, individuals tend to reflect on their life, draw upon past accomplishments and experiences, and approach the final chapters of their life journey.
According to the World Health Organization (WHO), the proportion of the global population aged over 60 is expected to nearly double, increasing from 12% in 2015 to 22% by 2050. It is also anticipated that, by the year 2020, the number of people aged 60 and older will surpass the number of children under 5 years of age. Based on the 2011 population census in India, there are approximately 104 million elderly individuals, comprising 53 million females and 51 million males. The percentage of elderly individuals in the population has risen from 5.6% in 1961 to 8.5% in 2011. Projections indicate that by 2050, the elderly population in India will account for 19% of the total population. The majority of elderly individuals have accumulated a wealth of life experiences and generally express contentment with their lives, even in the presence of illnesses or physical challenges. Nevertheless, significant life changes, which can manifest at both the physical and cognitive levels during older age, may trigger feelings of discomfort, stress, and sadness. In recent times, there has been a growing emphasis on understanding the effects of both physical and mental health conditions on overall quality of life.

Geriatric age (old age)
Geriatric age, also known as old age, is a stage in an individual's life cycle that encompasses a range of predictable life events, including both physical and cognitive changes. These changes vary among individuals and across cultures, as do the associated responsibilities and expectations. The physical and cognitive changes in geriatric individuals are often quite noticeable. Examples of these changes include skin wrinkling, graying of hair, balding, tooth loss, diminished vision, limited mobility, slower information processing, and conditions such as dementia (as noted by Baltes in 1991) [4]. Similar to factors like race, gender, and socio-

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economic status, age also plays a role in societal hierarchies, with certain age groups being more valued than others (as observed by Riley in 1978) [33]. Age can serve as both a unifying and segregating force in society. The identification with specific age groups can sometimes lead to negative perceptions of aging among younger adults, resulting in a broad division between older and younger adults across spatial, institutional, and cultural domains (as discussed by Packer and Chasteen in 2006) [34]. Aging is a lifelong process encompassing physical, psychological, and social changes. Throughout this maturation process, individuals experience shifts in their levels of dependence and independence.

Physical changes
Physical changes associated with the aging process can be categorized as primary or secondary. Primary aging is a natural outcome of the gradual accumulation and impact of molecular and cellular damage over time. These primary factors are beyond our control and cannot be modified. In contrast, secondary aging is a result of poor lifestyle habits such as lack of exercise and inadequate nutrition. These factors are controllable and modifiable. Secondary aging contributes to a decrease in physical capacity, an elevated risk of physical ailments, disabilities, and diseases (as discussed by Whitbourne and Whitbourne in 2010) [35]. The prospect of growing old can indeed be intimidating, especially when it comes to physical changes and the associated fears, such as restricted mobility, diminishing energy levels, and the loss of hearing and vision. However, these changes may become less daunting if people can accept them as a natural part of the aging process.

Social and Psychological Changes
Social and psychological changes in later life can bring about unique stressors and challenges. While people of all ages encounter stressful events or conditions in their surroundings, older individuals often face a greater prevalence of such challenges due to several factors. Firstly, as people age, they commonly experience a significant decline in functional abilities. Age-related diseases, the loss of loved ones, reduced work capacities, and the shift in social and financial status upon retirement are additional stressors that are frequently encountered by the elderly. These stressors can collectively contribute to feelings of insignificance, loneliness, depression, and a diminished quality of life among the elderly, as highlighted by Barua *et al*. in 2011 [8]. Consequently, the elderly population is particularly vulnerable, as they must navigate not only the physical aspects of biological aging but also the complex challenges that impact their psychological and social well-being.

Stereo type around aging
Stereotypes related to aging are generalized ideas or beliefs about a specific group of people, which may be partially true or entirely false. These stereotypes play a significant role in shaping how individuals perceive themselves and others. Age-related stereotypes involve making assumptions and generalizations about the behaviors and experiences of older individuals, often without considering their individual differences or unique situations. These stereotypes can vary across different cultures and evolve over time, and they can take on positive, negative, or neutral characteristics (as

noted by Ory *et al*. in 2003) [36]. Negative stereotypes about aging often depict it as a period of ill health, loneliness, dependency, and declining physical and mental functioning. Conversely, positive stereotypes portray aging as a time of vast life experiences, an opportunity to enjoy life, reduced responsibilities, and increased wisdom. Negative age stereotyping can have detrimental effects on the physical health, mental well-being, overall quality of life, and self-perception of older adults, both consciously and subconsciously (as discussed by Meisner in 2012) [37]. It can influence older individuals' motivation to live, potentially making them less inclined to accept medical treatments that could extend their lifespan. This also impacts health-related behavior, as some older adults may refrain from seeking help from healthcare professionals for issues like hearing loss because they believe such conditions are normal and inevitable consequences of the aging process (as highlighted by Levy in 2006) [26].

Challenges Faced by Elderly
Elderly individuals face a range of challenges, and while some remain self-sufficient, others require care and support. One significant challenge is the gradual loss of independence, which can result from various factors, including diminishing physical abilities, age discrimination, retirement, and financial constraints.

Another pressing social issue is the mistreatment and abuse of the elderly. The physical fragility that often comes with aging can render them dependent on others for everyday tasks like eating, toileting, and mobility. Providing care for the elderly can be more complex than caring for children due to their lifetime of experiences, knowledge, and fully developed personalities. The rapid industrialization and globalization of society have introduced significant changes in both the workplace and personal lives. The evolving technological landscape requires new skill sets that many elderly individuals may not possess. Younger adults often relocate to different cities or states in search of better job opportunities, while the elderly may lack the physical stamina to work outside the home. Consequently, older individuals living separately from their grown children has become a noticeable trend (as discussed by Acierno in 2010) [1]. This trend can be attributed to various factors, including the perception of older people as potentially burdensome due to their increased care needs.

Erik H. Erikson (1902-1994), gave a theory on psychosocial development. He divided an individual's life span into eight phases. Each phase represents its specific challenge that must be overcome. In the final stage or eighth stage i.e. the geriatric, the main challenge is integrity over despair. Individuals reflect back on their life they have lived and come up with either a sense of fulfilment or a sense of regret and despair from a life well lived and a life misspent respectively. They may have to confront regrets, disappointments or that they will never reach certain career goals. Some might feel proud of their accomplishments with a sense of integrity. Individuals with a strong sense of integrity would be able to embrace the new phase in life with a tremendous potential for creativity. They would engage themselves in learning new skills, activities, and prepare for the end of life.

Quality of life (QoL)
Erik H. Erikson, a prominent psychologist, developed a

theory of psychosocial development that spans an individual's entire lifespan and consists of eight distinct stages. Each stage represents a unique challenge that must be successfully navigated. In the final stage, known as the geriatric stage or the eighth stage, individuals confront the challenge of "integrity versus despair."

During this phase, individuals reflect on the life they have lived and evaluate it. They may either experience a sense of fulfillment, indicating integrity, or a sense of regret and despair from a life they perceive as misspent. In this stage, people may grapple with regrets, unfulfilled aspirations, or a realization that certain career goals may never be achieved. Some individuals, however, can take pride in their accomplishments and feel a sense of integrity.

Individuals who successfully achieve a strong sense of integrity are better prepared to embrace the new phase of life. They often exhibit a significant potential for creativity and engage in activities such as learning new skills, pursuing new interests, and preparing for the end of life with a sense of acceptance and readiness. This phase is characterized by a deep reflection on one's life and the ability to find meaning and satisfaction in the experiences and choices made throughout life.

Factors influencing quality of life

Quality of life is influenced by objective factors and subjective factors. The objective factors include income, employment, marital status, education, health and other environmental circumstances. The subjective factors include perception of overall quality of life, individual experiences and values, and proxy indicators such as well-being, happiness and life satisfaction. Eating healthy food, physical activities, regular medical check-up and health care facilities are essential for healthy life. However inability to consume healthy food due to lack of income and lack of healthcare facilities can lead to illness or disease that can influence the quality of life. Education plays an important role in providing knowledge, skills and experiences to participate effectively and efficiently in society, in getting better job opportunities and earn enough money. Higher income helps in achieving higher living standard. Thereby both higher education and income helps in improving quality of life [Bowling and Windsor, 2001] [13].

Depression

Depression can occur in the older adults, but it is not a normal part of growing older. It is a treatable medical condition just like diabetes and hypertension. According to the Centers for Disease Control and Prevention (CDC), major depression affects less than 1% to about 5% of the general elderly population, 13.5% in elderly who require home healthcare, and 11.5% in hospital care. The prevalence of depression in elderly is comparatively high in India ranging from 11.6% to 31.1% [Barua A *et al*., 2011] [8]. According to American Psychiatric Association, depression is most common medical illness which negatively affects the way one think, feels and act. The characteristic feature of a major depressive episode is a period of at least two weeks when the person experiences either depressed mood (most of the day, nearly every day) or loss of interest or pleasure in nearly all activities once enjoyed. American Association for Geriatric Psychiatry has given symptoms of depression which include:

- Persistent sadness
- Feeling slowed down.
- Frequent tearfulness.
- Feeling worthless or helpless.
- Withdrawal from social activities.
- Weight changes (loss or gain).
- Pacing or fidgeting.
- Difficulty sleeping.
- Difficulty concentrating.
- Excessive worries about finances and health problems.
- Unexplained physical pains.

Review of literature

It deals with literature survey of existing volumes of similar or related subjects that helped in shaping the theoretical position of the research project. It will give us an idea about the researches in the present area. The following studies provide us with the knowledge of the general conceptualization and specific challenges which can be expected in the ongoing research, and also helps the investigator to understand the problem from different dimensions.

Aassessed the reliability and validity of the World Health Organization, the WHOQOL-BREF, and its association with a number of clinical and socio- demographic factors in elderly depressed patients. The diagnostic assessment made using the Composite International Diagnostic Interview (CIDI) in 39 elderly patients. Also, they were independently assessed on a variety of measures including the WHOQOL-BREF (26-item), Hamilton Depression Rating Scale (HAM-D), Geriatric Depression Scale (GDS), Mini- mental State Examination (MMSE), Modified Barthel Index (MBI), measures of physical health status and social relationships and Instrumental activities of daily living (IADL). The study demonstrated satisfactory reliability and validity in 3 out of 4 domains of WHOQOL- BREF. Poor validity was seen in the social relationship domain. A strong correlation was seen in quality of life scores with the severity of depression whereas no relationship was seen between diagnostic co-morbidity and quality of life scores.

Buvneshkumar *et al*., 2018 [14] estimated the prevalence of depression in Kattankulathur block (Tamil Nadu) and factors are associated with depression among elderly. About 690 elderly subjects screened using Mini-cog assessment for dementia and post that depression using geriatric depression scale (GDS)-30 and socio-demographic profile variable collected. The overall prevalence of depression was estimated to be 35.5%. Socio-demographic factors such as female sex, nuclear family, loss of spouse, unemployed status, low socioeconomic status, chronic illness, and life events such as conflicts in family, death of the family member or close relative were significantly associated with depression.

A community based cross-sectional study by Karmakar N *et al*., 2018 [22] to find association between socio-demographic factors and different domains of quality of life in geriatric population. A sample size of 76 elderly aged 60 and above from rural areas of Madhupur, Sepahijala district, Tripura was questioned using WHOQOL-BREF scale. As per the study, social relationship domain scored better whereas psychological domain was affected worst as compared to other domains. The scores for psychological domain were better in high income individuals whereas social domain scores were better in male, illiterate and high income

individuals.

Kavithai *et al.*, 2018 [23] studied depression among elderly using geriatric depression scale-15 and its influencing factors in rural areas of Puducherry, India. A structured questionnaire was used to collect data on clinic-psychological and socio-demographic variables. Cognitive impairment screened using Hindi mental state examination scale (HMSE) and depression using Geriatric Depression Scale (GDS-15) in 360 elderly individuals. Less than half (41.4%) of them were found to have risk of developing depression. Significant factors for risk of depression includes being female gender, illiterate, unemployed, widow/single, having sleep problems, physical dependency and cognitive impairment.

Measured the prevalence of depression among in the rural setting and identified associated social factors with depression. Data was collected from 162 elderly aged 60 years and above through a structured interviewer administered questionnaire and short form of geriatric depression scale (GDS-S). The prevalence of depression found to be 52.5%. The social factors mainly associated were low socio-economic and single status. Increasing age also indicated slight risk for developing depression. All the above studies suggested a strong relationship various socio-demographic variables and depression; impact of socio-demographic factors on quality of life. The socio-demographic variables included in various studies were age, gender, marital status, education level, religion, employment, living arrangement, physical dependency, co-morbid conditions, traumatic life events, sleep quality and financial status (income). A very few studies have been conducted on effect of depression on quality of life and none of them have been conducted in Indian context. Thus, the focus of this study is to determine the effect of depression on quality of life and to verify impact of socio-demographic factors on depression and quality of life in the Faridabad city.

Research methodology
Objectives
- To assess the level of depression among elderly people in Faridabad city.
- To assess the quality of life (QOL) among elderly people in Faridabad city.
- To study the effect of selected socio-demographic variables on depression among elderly people in Faridabad city.
- To examine the contribution of selected number of socio-demographic factors and depression on quality of life (QOL) among elderly people and further to find out exact variance explained by each factors in predicting quality of life.

Hypotheses
The proposed hypotheses are following:

Alternative H₁
There would be a positive relation between increasing age and level of depression among elderly.

Alternative H₂
There would be an inverse relationship between increasing age and quality of life (QOL) among elderly.

Null H₃
There would be a significant association between selected socio-demographic and depression among elderly

Alternative H₄
The quality of life of the elderly people would be significantly predicted by socio-demographic factors and depression.

Operational Definition
Quality of life: Quality of life (QOL) can be defined as 'Individuals perceptions of their position in life in relation to their goals, expectations, standards or concerns' [WHO].
Geriatric people defined an age band of older adults. The geriatric is considered as 60 years and above in most of the countries in the world.

Depression
Depression is a common mental disorder, characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities [WHO].

Sampling Procedure
The sample for the study was taken from Faridabad city, Haryana. The researcher used the convenience sampling and a sample size of 98 was drawn from the community living in the Faridabad city.

Inclusion criteria
People above age of 60 years, both sexes and those who are willing to participate were included.

Exclusion criteria
People below age of 60 years, people with severe medical or psychological condition and unwillingness to participate in the study.

Study design
This study is based on the cross-sectional study design. A cross-sectional study is a type of observational study that analyzes data from a population, or a representative subset, at a specific point in time i.e. cross-sectional data.

Tool used for data collection
To achieve the objectives of the study following tools were used:
1. Socio-demographic data sheet.
2. The short- form of Geriatric Depression Scale (GDS-15).
3. WHOQOL BREF.

Socio-demographic data sheet
A socio-demographic data sheet was constructed to collect information regarding:

Participant's age	Gender	Educational qualification
Marital status	Living arrangement	Number of dependents
Chronic illness (self-reported)	Employment status	Monthly/family income (financial support)
Physical dependency for routine activities		

The short form of geriatric depression scale (GDS-15)
Geriatric Depression Scale (GDS), first created by Yesavage *et al.*, 1982 [32]. It has been tested and administered in screening depression among older adults. A Short Form GDS was developed in 1986, it consists of 15 questions. It is a self-reported inventory and takes about 5 to 7 minutes to complete. It consisted of 15 dichotomous questions which determine how the subject felt over the past week. Out of these 15 items, 10 questions (2, 3, 4, 6, 8, 9, 10, 12, 14, 15) indicate the presence of depression when answered 'yes' (positively), while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered 'no' (negatively). GDS-15, just as GDS-30, is a beneficial scale in determining depression in older adults.

Reliability and Validity
The short form of the scale i.e. GDS-15 (a=0.92) has significant correlation with the main scale GDS-30 (r=0.58). As per receiver operating curve (ROC) analysis, GDS-15 has a sensitivity of 0.9 and a specificity of 0.84 [Malakouti, 2006] [28].

Scoring
10 questions (2, 3, 4, 6, 8, 9, 10, 12, 14, 15) indicate the presence of depression when answered positively, while the rest (question numbers 1, 5, 7, 11, 13) indicated depression when answered negatively The score range varies from 0 to 15 and can be classified into various categories- score between 0-4 as normal; 5-8 indicates mild depression; 9-11 indicates moderate depression and 12-15 indicates severe depression.

WHOQOL-BREF
World health organisation developed world health organisation quality of life (WHOQOL) - 100 and WHOQOL-BREF instrument to measure quality of life. WHOQOL-100 comprises of 100 questions which covers six broad domains of quality of life namely, physical health, psychological health, level of independence, social relations, environment and spirituality/religion/personal belief. WHOQOL-BREF is an abbreviated 26 items version of WHOQOL-100 and assesses four major domains namely physical, psychological, social relationship and environment. These tools are available in over 20 different languages. All the items are captured on a five point likert scale. The WHOQOL instruments focus on individual's perception of their well-being, work-life balance, social relationship, satisfaction and issues that are important to a person's quality of life. [WHOQOL: User's manual].

Reliability and Validity
For each of the four domains, cronbach alpha values scores ranged from .66 to .84, thereby demonstrating good internal consistency. Though, the internal reliability for three domains was above 0.70, except for the domain 'Social Relationships' which has internal reliability score as 0.533. All domains has test–retest reliability significant at *p*< 0.01 level, indicating good stability of the scale. WHOQOL-BREF domain scores have been shown to correlate with the WHOQOL-100 domain scores at around 0.9.

Scoring
Out of 26 items, two items are overall quality of life and general health and rest 24 items have been divided into four domains i.e. physical health (7 items), psychological health (6 items), environmental domain (8 items) and social domain (3 items). Each of the 26 items is presented on five point Likert scale- 1= very unsatisfied to 5= very satisfied. WHOQOL- BREF domain scores are calculated by calculating the mean of all items included in each domain and then multiplying it by a factor of four. These scores are then transformed to a 0- 100 scale for analysis. The following values of scores were extracted from the reviewed studies and are applied in the current study: score ≤ 45, low QOL; score 46 to 65, moderate QOL; and score > 65 suggests relatively high QoL [Bani-Issa, 2011] [5]. The long detailed interviews and testing batteries are not tolerated well by many elderly due to fatigue. Hence, the short version of the GDS and WHOQOL-BREF are preferred in the present study.

Statistical techniques
In this study, data was entered into the excel spread sheet and analysed using statistical package for social sciences (SPSS) version 17. A multivariate analysis and regression analysis was conducted to determine the correlation between the socio-demographic variables and depression and impact of depression and socio-demographic variables on the quality of life.

Result
This study highlighted the association of socio-demographic factors with depression and impact of socio-demographic factors and depression on the quality of life of the study population. The frequency distribution of socio-demographic factors of the study group was (n=98). The study group comprised of majority (59%) of males, less than half (40.8%) of male and female were in age group 60 to 65 years and their mean age was 67.70 years with Standard deviation (SD) of 5.59. Regarding marital status, majority (68%) of them were married and more than half of them (53%) lives with spouse and children. The majority (77.5%) of them were unemployed (non-working). Regarding education, 21.4% had done graduation or post-graduation, 20.4% were illiterate while 17.34% could read and write. Majority (78.5%) of them were not physically dependent on others for their routine activities and more than half (52.5%) of them were taking care of dependents (number 1 to 5). More than half (58%) did not suffer from any chronic illness (self-reported) and 26.5% of them refused to reveal about their income or financial support. 24.5% of the elderly had income below 10 thousand per month to support their daily lives. The study revealed distribution of elderly in quality of life domains. Physical health domain (54%) and psychological health domain (39.8%) of study group were rated at moderate level whereas social domain and environmental domain were rated at low level with 40.8% and 37.7% respectively.

H₁: There would be a positive relation between increasing age and level of depression among elderly
This hypothesis has been proved. A significant correlation (.246) between age and the geriatric depression score (GDS score) at the 0.05 level was observed in the current study. Also, higher depression (63.7%) could be seen among elderly above 75 years of age as compared to the lower age groups.

H₂: There would be an inverse relationship between

increasing age and quality of life (QOL) among elderly

This hypothesis is rejected as no significant inverse relationship (.029) was observed between the increasing age and overall quality of life in the study group.

H₃: There would be a significant association between selected socio-demographic and depression among elderly

This hypothesis has been proved. Results demonstrate significant association between age and depression through a correlation coefficient .246 at the 0.05 level. A significant relationship between depression and marital status, education, chronic illness, income and physical dependency were found to be .479, -.526, -.426, -.369 and -.566 at the 0.01 level respectively. Whereas socio-demographic variables such as gender, living arrangement, number of dependents and employment status were found to have no influence on the depression in the study group.

H₄: The quality of life of the elderly people would be significantly predicted by socio- demographic factors and depression

This hypothesis has been proved through a regression analysis. The quality of life of the elderly people in the study group was significantly predicted by the depression. Among the socio-demographic variables- monthly income, physical dependency and age significantly predicted the quality of life of the elderly people.

Discussion

The present study was conducted to determine the impact of socio-demographic factors and depression on the quality of life among elderly in the Faridabad city, Haryana. The older adults aged 60 and above were included in the current study. The mean age of study participants was 67.70 ± 5.59 years. The present study has highlighted the association of socio-demographic variables with depression and association of socio-demographic factors and depression with the quality of life of the study population. Changes in the physical, mental and social health continues throughout an individual's life. But when an individual reaches an age of 60 years or above (considered being geriatric), these changes are significant. There are physical changes in the body such as wrinkling of the skin, vision and hearing loss, health issues and fragility; there are emotional and social changes such as increased chances of losing spouse, dependency on others, living alone and loss of job opportunities or unemployment.

In the present study, a significant association between age and depression through a correlation coefficient .246 at the 0.05 level was observed. This proves our hypothesis that depression increases with an increase in age (H₁). Also we could see an increasing trend of depression with increasing age. In accordance to this finding, Barua A *et al*. (2010) [6] found depression to be relatively more in elderly aged more than 70 years. Also, study conducted by Paul N *et al*. (2018) indicated risk for developing depression with increasing age.

A significant relationship between depression and marital status, education, chronic illness, income and physical dependency were found to be .479, -.526, -.426, -.369 and -.566 at the 0.01 level respectively, which proves our hypothesis (H3). Whereas certain socio- demographic variables such as gender, living arrangement, number of

dependents and employment status were found to have no influence on the depression in the study group. In accordance to above findings, Barua A *et al*. (2010) [6] found a significant association of depression with older age group, female sex, poor financial status, loss of spouse, living alone, dependency and chronic illness. Arumugam *et al*. (2013) [2] observed significant association of with geriatric depression with loss of a spouse, illiteracy and financial dependence in both rural and urban slum community. Also, found that depression was significantly associated with female gender, increasing age, singles, staying alone, illiterate, low socio-economic group and those with stressful life events.

First thought that comes in mind regarding geriatric is deteriorating health, physical illness, loneliness and neglect. There is increasing trend of nuclear families in the modern societies. This leads to older adults to experience a terrible feeling of redundancy. The situation becomes grave when elderly finds themselves left alone without anyone to look after them. In the present study, the hypothesis (H2) stating that with increase in age would result in decrease in overall quality of life in the study group has been rejected though age is a predominant predictor of quality of life. Present study showed that monthly income, physical dependency and age significantly predicts the quality of life of the elderly people (H4). In accordance to these finding, found that functional ability have positive correlation with perceived quality of life. Datta D *et al*. (2015) [19] in their study observed that quality of life score improved significantly with increase in the income and for the independent elderly population than those who were dependent.

Depression in elderly causes a severe structural and functional limitation which in turn affects the quality of life. An elderly patient suffering from depression often has a combination of psychological, physical and social unmet needs. In the present study, depression found to be a significant predictor for the quality of life of the elderly people (H4). In accordance to this finding, study conducted by Naumann & Byrne (2004) [38] found a strong correlation between quality of life scores with the severity of depression in older adults.

Hence, from the above study it is clearly seen that the socio-demographic factors such as age, marital status, education, chronic illness, income and physical dependency have a strong relationship with the depression; however there is no impact of gender, living arrangement, number of dependents and employment status on depression. Variables like monthly income, physical dependency and age; depression significantly predicts the quality of life of study population whereas marital status, gender, living arrangement, number of dependents, education, chronic illness and employment status showed no influence on quality of life of study population.

Conclusions

Based on the current research study and its result, it is concluded that socio-demographic variables and depression affects the quality of life in older adults. The socio-demographic variables like marital status, education, income, chronic illness and physical dependency has a strong relationship with depression. Whereas variables like gender, employment status, living arrangement and number of dependents has not shown any association with

depression. The study group scored moderately on physical and psychological domains and low on social and environmental domains of quality of life. The variable like income, physical dependency, age and depression strongly predicts the quality of life of older adults. Also, alternative hypothesis regarding inverse relationship between increasing age and quality of life (QOL) among elderly has been rejected and remaining hypothesis has been accepted. The small size of the research sample made it disadvantageous in generalizing the results of the study.

Implications
- It provides the opportunities to develop better understanding about various factors affecting depression in elderly which will help in creating a positive environment for them.
- The study gave light on how elderly perceive their quality of life and the factors affecting it.
- It will help to create a program/policy for elderly that allow them to develop psychological well-being.

Limitations
The investigator has put in a lot of effort to bring out the research work without any limitation but it is not completely possible to avoid some unavoidable errors. Thus, the investigator feels a few limitations as follows:
- Study may be conducted on large population to increase its comprehensiveness.
- The sample was taken from one particular city hence the opinion may be geographically biased and the finding of the study cannot be broadly generalized across populations.
- Qualitative analysis of quality of life could have proved more useful.
- In the present investigation, the cross-sectional approach to the study impact of socio-demographic factors and depression on quality of life of elderly was used rather than the longitudinal approach.
- The WHOQOL-BREF does not allow assessment of the individual facets within these domains.
- No formal diagnosis of depression was made in the study sample. Self-report inventory was used for determining the level of depressive symptoms in the elderly persons.

Future suggestions
- Longitudinal studies on a larger group of elderly men and women are needed in future considering the above limitations.
- A similar study needs to be conducted on a larger section of the elderly population as sample size in present study was small.
- Both male and female ratio in the sample should be equivalent for determining gender differences.
- The study was confined only to Faridabad city, it is therefore suggested that study may be conducted on other cities also to increase comprehensiveness of its conclusions.
- A study should be conducted to find out the remedial measures for the depression and to increase quality of life of elderly population.
- Future studies can focus on qualitative analysis along with quantitative data collection.
- As an extension to this research, it is recommended to conduct personal interviews and combine the learning to derive the right set of inference related to this research.

References
1. Acierno R, Hernandez MA, Amstadter AB, Resnick HS, Steve K, Muzzy W, *et al*. Prevalence and correlates of emotional, physical, sexual, and financial abuse and potential neglect in the United States: the National Elder Mistreatment Study. American journal of public health. 2010;100(2):292–297.
2. Arumugam B, Nagalingam S, Nivetha R. Geriatric depression among rural and urban slum community in Chennai: A cross sectional study. J Evol Med Dent Sci. 2013;3:795-801.
3. Atchley RC. A Continuity Theory of normal aging. The Gerontologist. 1989;29(2):183-190.
4. Baltes PB, Baltes MM. Psychological perspectives on successful aging: The model of selective optimization with compensation. Cambridge University Press; c1991.
5. Bani-Issa W. Evaluation of the health-related quality of life of Emirati people with diabetes: integration of sociodemographic and disease-related variables. Eastern Mediterranean Health J. 2011;17(11):825- 830.
6. Barua A, Ghosh MK, Kar N, Basilio MA. Socio-demographic Factors of Geriatric Depression. Indian Journal of psychological medicine. 2010;32(2):87–92.
7. Barua A, Acharya D, Nagaraj K, Vinod Bhat H, Nair NS. Depression in elderly: A cross-sectional study in rural South India. Journal International Medical Sciences Academy. 2007;20(4):259-261.
8. Barua A, Ghosh MK, Kar N, Basilio MA. Prevalence of depressive disorders in the elderly. Annals of Saudi medicine. 2011;31(6):620–624.
9. Beevers CG, Clasen PC, Enock PM, Schnyer DM. Attention bias modification for major depressive disorder: Effects on attention bias, resting state connectivity, and symptom change. Journal of abnormal psychology. 2015;124(3):463-475.
10. Beck AT, Epstein N, Harrison R. Cognitions, attitudes and personality dimensions in depression. British Journal of Cognitive Psychotherapy. 1983;1(1):1–16.
11. Bowling A, Gabriel Z, Dykes J, Dowding LM, Evans O, Fleissig A, *et al*. Let's ask them: a national survey of definitions of quality of life and its enhancement among people aged 65 and over. International journal of aging & human development. 2003;56(4):269–306.
12. Bowling A, Grundy E. Longitudinal studies of social networks and mortality in later life. Reviews in Clinical Gerontology. 1998;8:353-361.
13. Bowling A, Windsor J. Towards the Good Life: A Population Survey of Dimensions of Quality of Life. Journal of Happiness Studies. 2001;2:55–82.
14. Buvneshkumar M, John KR, Logaraj M. A study on prevalence of depression and associated risk factors among elderly in a rural block of Tamil Nadu. Indian J Public Health. 2018;62:89-94.
15. Cao W, Guo C, Ping W, Tan Z, Guo Y, Zheng J. A Community-Based Study of Quality of Life and Depression among Older Adults. International journal of environmental research and public health. 2016;13(7):693.
16. Costanza R, *et al*. Quality of Life: An Approach

Integrating Opportunities, Human Needs, and Subjective Well-Being. Ecol. Econ. 2007;61:267-276.

17. Cowgill D. The Aging of Populations and Societies. The Annals of the American Academy of Political and Social Science. 1974;415:1-18.

18. Cumming E, Henry W. Growing Old: The Process of Disengagement. New York: Basic Books; c1961.

19. Datta D, Datta PP, Majumdar KK. Association of quality of life of urban elderly with socio-demographic factors. Int J Med Public Health. 2015;5:274-278.

20. Dowd JJ. Aging as exchange: A preface to theory. Journal of gerontology. 1975;30(5):584–594.

21. Ellis A. The revised ABC's of rational-emotive therapy (RET). J Rational-Emot Cognitive-Behav Ther. 1991;9:139–172.

22. Karmakar N, Datta A, Nag K, Tripura K. Quality of life among geriatric population: A cross-sectional study in a rural area of Sepahijala District, Tripura. Indian journal of public health. 2018;62(2):95–99.

23. Kavithai, Pamagal Anandaraj R, Buvaneswary S, Prakash M. A cross sectional study on screening for depression among elderly in rural areas of Puducherry, India. International Journal of Research in Medical Sciences. 2018;7:46.

24. Kumar SG, Majumdar AGP. Quality of Life (QOL) and Its Associated Factors Using WHOQOL-BREF among Elderly in Urban Puducherry, India. Journal of clinical and diagnostic research: JCDR. 2014;8(1):54–57.

25. Lewinsohn PM. A behavioral approach to depression. In R. J. Friedman & M. M. Katz (Eds.), The psychology of depression: Contemporary theory and research. John Wiley & Sons; c1974.

26. Levy BR, Slade MD, Gill TM. Hearing decline predicted by elders' stereotypes. Journals of Gerontology B Psychological Sciences and Social Sciences. 2006;61(2):82–87.

27. Lokare L, Nekar MS, Mahesh V. Quality of life and restricted activity days among the old aged. Int J Biol Med Res. 2011;2:1162-1164.

28. Malakouti SK, Fatollahi P, Mirabzadeh A, Salavati M, Zandi T. Reliability, validity and factor structure of the GDS-15 in Iranian elderly. International Journal of geriatric psychiatry. 2006;21(6):588-593.

29. Maslow AH. Towards a psychology of being. Princeton: D. Van Nostrand Company; c1962.

30. Sinha SP, Shrivastava SR, Ramasamy J. Depression in an older adult. Mental Health Services under DMHP. Indian Journal of psychiatry. 2013;45(3):161–165.

31. WHOQOL: Measuring Quality of Life. (2014, March 11). Retrieved from https://www.who.int/healthinfo/survey/whoqolqualityof life/en/index1.html, accessed on 11.11.20

32. Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, et al. Development and validation of a geriatric depression screening scale: A preliminary report. Journal of psychiatric research. 1982;17(1):37-49.

33. Mantoura RF, Dickson A, Riley JP. The complexation of metals with humic materials in natural waters. Estuarine and Coastal Marine Science. 1978 Apr 1;6(4):387-408.

34. Packer DJ, Chasteen AL. Looking to the future: How possible aged selves influence prejudice toward older adults. Social cognition. 2006 Jun 1;24(3):218-47.

35. Whitbourne SK, Whitbourne SB. Adult development and aging: Biopsychosocial perspectives. John Wiley & Sons; 2010 Oct 18.

36. Listenberger LL, Han X, Lewis SE, Cases S, Ory DS, Schaffer JE, et al. Triglyceride accumulation protects against fatty acid-induced lipotoxicity. Proceedings of the National Academy of Sciences. 2003 Mar 18;100(6):3077-82.

37. Wick W, Platten M, Meisner C, Felsberg J, Tabatabai G, Simon M, et al. Temozolomide chemotherapy alone versus radiotherapy alone for malignant astrocytoma in the elderly: the NOA-08 randomised, phase 3 trial. The lancet oncology. 2012 Jul 1;13(7):707-15.

38. Naumann VJ, Byrne GJ. WHOQOL-BREF as a measure of quality of life in older patients with depression. International Psychogeriatrics. 2004 Jun;16(2):159-73.