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DEMOGRAPHIC DETERMINANTS OF LONELINESS AMONG OLDER-ADULT PERSONS IN UKPO, ANAMBRA STATE

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Abstract:

This study investigated the demographic determinants of loneliness among older-adult persons in Ukpo, Anambra State, Nigeria. Two hundred and twenty-six community dwellers (157 females; age: 60-87; mean: 71.39) were recruited for the study. Measure of loneliness were obtained using the Revised University of California, Los Angeles (R-UCLA) Loneliness Scale by Russel et al., (1980). A three-way analysis of covariate (ANCOVA) design was used to examine the impact of gender, education, and occupation on loneliness. Result showed no significant differences for gender; F (1,226) = 1.12, and occupation; F (3,226) = 1.86 on loneliness. Also, age as covariate did not show significant difference; F (1,226) = 2.80. However, there was significant differences for education on loneliness; F (3,226) = 3.28. On the other hand, no significant interactions were seen in gender and occupation; F (3,226) = 0.63, education and occupation; F (8,226) = 1.28 as well as gender, education and occupation; F (7,226) = 1.13. The findings highlight the importance of considering educational factors in addressing loneliness and promoting well-being in this population.

Keywords: Gender, Occupation, Level of Education, Loneliness, Older-Adults

INTRODUCTION

Loneliness is a prevalent psychological phenomenon that can affect individuals across various demographic groups. From the observations of Cacioppo et al., (2015), Van Dulmen & Goossens (2013), most people at some points in their lives have experienced loneliness, which could be could be a prolonged and painful experience, with harmful effects especially on the individual's physical

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health and mental health. When changes in social interactions are involuntary, permanent and difficult to compensate for, they are more likely to lead to a significant increase in loneliness. While numerous studies have indicated that males experience higher levels of loneliness compared to female (Maes, 2019), (Kovlov, 2013) insists in his study that the issue of loneliness impacts all segments of the population, while significant stereotypes is mostly on the females. These gender disparities in loneliness among older adults have proven to be highly contentious, thus, producing conflicting results. From the observation of (Mirowsky and Ross 2003); (Dannefer, 2003), individuals exhibit greater competence and mastery over their lives as a result of higher educational achievement, and this contributes to the totality of benefits and disadvantages experiences throughout the lifespan. The transition to retirement and the associated loss of one's work role might intensify feelings of loneliness. After retiring, maintaining social contact and engagement demands more self-directed efforts, and an individual's social functioning may have a greater impact on their mental health and overall well-being compared to their working years.

A number of researches (Hansen & Slagsvold 2015; Savikko et al. 2005; Bilgili, et al. as quoted in Arslantaş, et al. 2015) have documented prevalence that tend around 50%. According to Nzabona et al. (2016), 70% of senior Ugandans in Africa reported experiencing loneliness at an increasingly high rate. According to research, loneliness is a major risk factor for dementia, sleeplessness, increased mortality rates, and poor physical and mental health in the elderly (Hansen and Slagsvold 2015; Davidson and Rossall 2014; Adegoke 2014; Hawkley and Cacioppo 2010).

Loneliness, as a phenomenon, receives only passing mentions in relation to other mental disorders in the DSM-IV-TR (Heinrich & Cullone, 2006). However, extensive research has established its

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association with various mental health problems, including anxiety, depression, and suicidal behavior. Loneliness is also linked to challenges in self-regulation, such as alcohol abuse and eating disorders. Moreover, it has been connected to physical health issues, including compromised immune functioning, sleep disturbances, and cardiovascular disease (Heinrich & Cullone, 2006). Furthermore, loneliness has been found to be associated with an increased risk of Alzheimer's disease and general cognitive decline (Hawkley & Cacioppo, 2003).

Loneliness varies from short term mood to intense and persisting states. The extreme forms of loneliness are the kinds that social scientists and the general public are more concerned about. A distinction can be made between emotional loneliness that occurs when an individual lacks an intimate relationship with one special person such as a spouse or parent, and social loneliness that occurs when an individual has little or no friends, or lacks a sense of belongingness to a community. Solitude is not invariably accompanied by loneliness.

In contrast to individualistic societies where older adults tend to favor independent living arrangements (Dykstra, 2009), it is common in Nigeria for older adults to reside with their families (Oladeji, 2011, Onyemaechi, 2025). This communal living arrangement gives rise to a collective reverence for old age, fostering a widely held societal expectation that families should personally provide care for their elderly members, regardless of their health and mental well-being. This expectation leans towards familial caregiving over the involvement of professionals (Atchley, 2000; Okoye, 2012, Onyemaechi & Okafor, 2025). An instance is made by De Jong Gierveld & Van Tilburg (1999); Green et al., (2001); Luo et al., (2012), where they suggested that a larger percentage of loneliness among older adults are often attributed to the smaller social networks,

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greater percentage of single households, and more prevalent and/or severe functional limitations among this age group relative to younger adults.

It is considered to be a public health priority (Gerst-Emerson & Jayawardhana, 2015; Holt-Lunstad, 2017) because of its detrimental impact on mental and physical health and educational and workplace performance (Lim et al., 2020).Loneliness is often equally considered a problem of the elderly, but it can affect people of all ages. Findings from Cigna U.S. Loneliness Index, (2018); Perlman, (1990); Pinquart and So¨ rensen, (2003); Qualter et al., (2015) suggests that with previous studies that have been explored, it has been observed that the prevalence and frequency of lonely feelings across the life course have found, contrary to popular knowledge, that loneliness is highest in young adults and then declines throughout adulthood until oldest old age, at which time it increases and can surpass the prevalence and frequency seen in young adults (Okonkwo, et.al, 2023, Ejidike, et.al, 2023, Achebe & Onyemaechi, 2023).

Luhman and Hwkley (2016) in their investigations on loneliness over the life span concluded that loneliness was highest in late adolescence, a gradual declination occurred during middle adulthood, and then increasing for late adulthood. In times of loneliness, these individuals experience feelings of emptiness and intense longing for loved ones or acceptance (Roos & Klopper, 2010). Some authors argue that when older persons live alone or are alone, it does not necessarily mean that they are lonely: rather that the prolonged act of living alone could be a strong predictor for loneliness (Grenade & Boldy, 2008; Routasalo & Pitkala, 2003).

Understanding what might result to people feeling lonely and what makes some people get and feel stuck in loneliness is important for the invention of well-targeted successful interventions to

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prevent and mitigate the effects of loneliness (Qualter et al., 2015). Two people who have different desires in relationship might feel lonely to a different extent even with the same objective number of close relationships, and at the same time, two people who do not feel that their actual relationship are fulfilling might still feel lonely to a different extent even with the same desired number of close relationship.

Statement of the Problem

Loneliness presents a mortality risk on par with heavy smoking and surpasses nine other prominent health hazards, including obesity, excessive alcohol consumption, and lack of physical activity (Holt-Lunstad et al., 2010). Previously, loneliness has been associated with objective social isolation, introversion, poor social skills and depression, but in recent studies, it is now seen as a unique condition, which individuals perceive themselves to be socially isolated, even when they are in contact with other people (Cacioppo &Cacioppo, 2018).

Some demographic variables like gender (Dong et al.,2012; Losada et al., 2012; Pinquart & Sorensen, 2001Singh & Misra, 2009; Wilson & Moulton, 2010), and occupation (Michaelson et al., 2017; Matthews et al., 2018) have shown mixed findings in previous results making meaningful interpretation difficult. More importantly, very few studies have investigated demographic variables on loneliness in Nigeria and Sub-Saharan Africa, limiting further our understanding of loneliness in the older adults. This study therefore seeks to fill the gap in knowledge regarding demographic variables and loneliness in older adult population.

Purpose of the Study

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The purpose of this study was to investigate the roles of demographic variables on loneliness among older-adult persons in Ukpo, Anambra State, Nigeria.

The specific objectives are:

1. To find out whether gender differences will exist on loneliness among older-adult persons in Ukpo, Anambra state, Nigeria.
2. To examine the roles of occupation in loneliness in the population.
3. To find out if level of education will significantly differ in loneliness in the sample.
4. To show the interaction effect of gender, occupation and education on loneliness among older-adult persons in Ukpo, Anambra state, Nigeria.

Research Questions

1. To what extent will gender significantly differ on loneliness among older-adult persons in Ukpo, Anambra state, Nigeria?
2. To what extent will occupation significantly differ on loneliness among older-adult persons in Ukpo, Anambra state, Nigeria?
3. Will levels of education significantly differ on loneliness among older-adult persons in Ukpo, Anambra state, Nigeria?
4. Will there be interaction effect of gender, occupation and education on loneliness in the sample?

Significance of the Study

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This study seeks to investigate the demographic determinants of loneliness among older-adult persons in Ukpo, Anambra state, in Nigerian. While loneliness is recognized as an important psychological and public health issue, it is still highly understudied in the academic literature (Lim et al. 2020). Also, different indicators of loneliness are rarely studied together and inconsistencies in findings are always yielded. The findings of this study will help address the challenges people of the older developmental stage face, which results in loneliness.

This study can also broaden the research on loneliness in Nigeria, as there have not been many previous researches which has covered loneliness in Nigerian samples. It will also address the discrepancies in loneliness which could exist in the quality or quantity of intimate relationships (Igbokwe 2020, Onyemaechi, et.al 2025). Thus, this study is significant because it can provide updated information on loneliness in a developing country like Nigeria, especially when it concerns older adults of Nigeria samples.

THEORETICAL REVIEW

Peplau and Perlman (1982) stress the significance of cognitive processes in managing and mitigating feelings of loneliness. The theorists believe that loneliness may stem from individuals perceiving an insufficiency in attained social relationships compared to their desired social connections. It centered on individuals' reactions to and encounters with loneliness, acknowledging the role of social elements. This theory suggests that the manner in which individuals perceive their loneliness significantly shapes their experience of it. Moreover, it suggests that fostering self-esteem and enhancing social skills can potentially alleviate loneliness.

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It however, overlooked the robust association between social networks and loneliness, neglecting the inclusion of elderly individuals dealing with cognitive impairment (Donaldson & Watson, 1996; Victor et al., 2000, Uzoma et.al, 2021).

The theory equally neglected the broader social context of loneliness and lacks predictive power in understanding and addressing it comprehensively. While shedding light on cognitive processes related to loneliness, it may not offer exhaustive explanations for its development and persistence. Social factors like support networks, relationship quality, and societal norms, which profoundly impact loneliness, are inadequately addressed.

Weiss (1973) further highlighted existence of two distinct forms of loneliness: emotional and social. Emotional loneliness, as per Weiss, arises from a deficit in emotional bonds within intimate relationships. Events such as the loss of a loved one, divorce, or lacking close friendships can trigger this type of loneliness. On the other hand, social loneliness stems from a perceived scarcity of social connections. Factors like moving to a new place, unemployment, or feeling excluded from a community can trigger this form of loneliness, according to Weiss. Therefore, Weiss' (1973) theory emphasized the significance of both the quality and quantity of social and emotional relationships, attributing distinct symptomologies to each form of loneliness. Emotional loneliness can trigger anxiety, depression, distress, and at times, hostility. In contrast, social loneliness might lead to feelings of boredom, agitation, and restlessness (Vogiatzoglou, 2008, Okoye,et.al, 2018).

EMPIRICAL REVIEW

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Olawa and Idemudia, (2020) examined gender disparities in the connections between various forms of social engagement and loneliness within a group of 406 Nigerian older adults, of which 257 were females, with an average age of 76.69 ± 8.27 years. Binary logistic regressions were employed to assess underlying assumptions. The findings revealed that not all types of social engagement equally predicted reduced loneliness risks for both men and women. When controlling for pertinent covariates, it was observed that visitation to children and participation in traditional ceremonies were associated with decreased loneliness risk among women. Conversely, for men, attending traditional ceremonies was linked to an elevated risk of loneliness.

Morrish, and Medina-Lara, (2021) reviewed the correlation between loneliness and unemployment among individuals of working age, along with the potential for a self-perpetuating cycle impacting healthcare outcomes. Thirty-seven studies, comprising 30 cross-sectional and 7 longitudinal analyses, were reviewed. Loneliness was assessed using direct inquiries or loneliness scales, while unemployment status was either self-reported or obtained from national registers. The findings consistently indicated a positive association between unemployment and heightened loneliness across all studies. The intensity of this association increases with the severity of loneliness, peaking notably among individuals aged 30–34 and 50–59. Logistic regression analyses consistently demonstrate a significant increase, of at least 40%, in the likelihood of reporting loneliness among the unemployed.

Balkiet al., (2023), examined the indirect influence of educational attainment (EA) on pandemic-related loneliness among older adults. Utilizing the developmental adaptation model as a conceptual framework. This cross-sectional observational study involved 92 older adults aged ≥65

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years in the United Kingdom. Data collection included demographic variables such as age, gender, ethnicity, and the highest level of education attained. Standardized measures such as the University of California Los Angeles Loneliness Scale, Connor–Davidson Resilience Scale, Lubben Social Network Index, and Technology Experience Questionnaire were employed. Pearson correlation, moderation, and mediation regression analyses were conducted to examine the research hypotheses.The study revealed a higher prevalence of loneliness among older adults compared to pre-pandemic norms. Educational attainment was positively correlated with increased TU and PR, and moderated the impact of social isolation on loneliness. PR fully mediated the relationship between EA and loneliness, while TU partially mediated this relationship.

Hypotheses

1. There will be no gender differences on loneliness among older-adult persons in Ukpo, Anambra State.
2. Occupation will not significantly differ on loneliness among older-adult persons in Ukpo, Anambra State.
3. Education level will not significantly differ in loneliness in the sample.
4. There will be no significant interaction effect of gender, occupation and education on loneliness in the sample.

METHOD

Participants

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Two Hundred and twenty-six community dwelling older-adults (157 females; age 60-87; mean 71.39; SD 9.14) participated in the study. Participants were recruited from Ukpo, in Dunukofia Local Government Area of Anambra State. 19 had tertiary education, 35 had secondary education, 133 had primary education and 39 had no education at all. 73 older-adults were traders, 19 were civil servants, 82 had other jobs, and 52 had no job at all. The participants were selected using census method.

Instruments

The instrument used for this study was the Revised University of California, Los Angeles (R-UCLA) Loneliness Scale. This is a 20 item scale developed by Russell, Peplau, and Cutrona, (1980). It is designed to assess an individual's subjective experiences of loneliness and social isolation. Participants assign ratings to each item on a scale ranging from 1 (Never), 2 (Rarely), 3 (Sometimes), 4 (Often). The revised UCLA is a revised version of the Original UCLA Loneliness Scale, revised for the purpose of simplifying the wording and to make 10 of the 20 original items reverse score. The measure demonstrates strong internal consistency (with a coefficient alpha of .96) and exhibits a test-retest correlation of .73 over a two-month interval. Also, Russel (1996) evaluated the psychometric properties of the UCLA Loneliness Scale Utilizing data gathered from previous studies involving college students, nurses, teachers, and the elderly, an examination of the reliability, validity, and factor structure of the updated UCLA Loneliness Scale was conducted. The findings revealed a high level of reliability, demonstrated through both internal consistency (with coefficient alpha ranging from .89 to .94) and test-retest reliability over a one-year span (r = .73). Convergent validity was supported by significant correlations between the scale and other

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measures of loneliness. Furthermore, construct validity was affirmed by significant associations with assessments of interpersonal relationship adequacy, as well as correlations between loneliness and indicators of health and well-being. Translation and adaptation of study instruments were conducted to take care of older adults unfamiliar with English language in the study. This is due to the fact that some of the study participants were not educated. The study instrument was translated into the Igbo language, the native tongue of the research participants with backward translation to English language. This translation process incorporated both judgmental and statistical methodologies (ITC, 2005). The judgmental approach employed the backward-translation method (Bolaños-Medina, 2012). For the statistical approach, bilingual individuals who are Igbo language experts received both the English and Igbo language versions of the instruments. The test-retest correlation between the English and Igbo versions of the instruments ranged from .67 to .85. The researcher conducted a pilot test with the population of the study and reported a Cronbach Alpha of 0.78

Procedure

Participants were recruited from older adult support group at Nnamdi Azikiwe University Teaching Hospital, Geriatric Clinic, Ukpo Annex, Anambra State. The group were part of longitudinal study for ageing project at Ukpo. The present study was part of the project and followed same ethical approval. Following recruitment and consent to participate, participants

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were administered the R-UCLA scale by a trained research assistant. The registry for the older adult group at Ukpo indicated 350 persons. Among this population, 250 agreed to participate in the study. Following scale administration, 226 questionnaires were well responded, 20 declined to answer all the questions while 4 participants did not come up to respond to the questionnaire as agreed.

Ethical Consideration

The participants were debriefed about the study to ensure uttermost transparency and openness in responding to the test. They were assured of their uttermost confidentiality throughout the duration of the research. A consent form was also signed by the respondent as a sign of agreement to participate in the study. The study followed the research ethical proposal, and was approved by Ethical Review Board.

Inclusion Criteria

The criteria for participation include: participants not having a history of stroke, no history of dementia diagnosis and no history of psychotic psychiatric diagnosis within the past twelve months.

Design and Statistics

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Cross-sectional design was used for this study. Descriptive statistics was employed to provide a concise summary of the data, determine the mean, standard deviation and total number of each variable and their covariates. A Three-Way Analysis of covariatewas used for data analysis.

RESULT

First hypothesis was on gender differences in loneliness in the participants. The result showed no significant difference between males and females on loneliness. For hypothesis 2, no significant difference was found among occupation and loneliness. Third hypothesis on whether education levels will significantly differ on loneliness was significant. Furthermore, no significant interaction effects were seen for gender, education and occupation on loneliness. Table 1 showed the descriptive statistics while table 2 showed 3-WAY ANCOVA statistical estimations for the hypotheses.

Table 1: Summary Table of Descriptive Statistics for the Participants

Gender	Education	Occupation	Mean	Std. Deviation	N
Male	Tertiary	Trading	37.0000	.	1
		Civil Service	44.6000	5.89915	5
		Others	39.0000	12.49000	3
		No job	40.0000	.	1
		Total	41.7000	7.74668	10
	SSCE	Trading	32.7500	3.86221	4
		Civil Service	27.5000	6.36396	2
		Others	41.5714	10.79903	7

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		No job	30.0000	.	1
		Total	36.2143	9.70471	14
	Primary	Trading	34.9000	6.50555	10
		Civil Service	31.0000	4.35890	3
		Others	41.5455	8.64499	22
		No job	35.9091	7.32741	11
		Total	38.0652	8.29029	46
	Not Educated	Others	30.0000	4.24264	2
		No job	35.5000	.70711	2
		Total	32.7500	4.03113	4
	Total	Trading	34.4667	5.64253	15
		Civil Service	37.1000	9.39799	10
		Others	40.6471	9.30585	34
		No job	35.7333	6.48588	15
		Total	37.9189	8.43794	74
Female	Tertiary	Trading	34.0000	4.54606	4
		Civil Service	34.5000	9.19239	2
		Others	39.5000	19.09188	2
		No job	54.0000	.	1
		Total	37.5556	10.35750	9
	SSCE	Trading	37.0000	7.13364	10
		Civil Service	32.5000	7.50555	4
		Others	36.4000	5.85662	5
		No job	26.0000	2.82843	2
		Total	34.9524	7.10265	21
	Primary	Trading	37.6486	6.56259	37
		Civil Service	36.0000	3.46410	3
		Others	37.3793	8.21329	29
		No job	39.0000	7.77628	18
		Total	37.7816	7.26000	87
	Not Educated	Trading	34.7143	3.72891	7
		Others	37.7500	7.68854	12
		No job	40.8750	8.21279	16
		Total	38.5714	7.55873	35
	Total	Trading	36.9310	6.27124	58
		Civil Service	34.1111	6.11237	9

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		Others	37.4583	8.06347	48
		No job	39.5135	8.59141	37
		Total	37.5592	7.51399	152
Total	Tertiary	Trading	34.6000	4.15933	5
		Civil Service	41.7143	7.84675	7
		Others	39.2000	13.00769	5
		No job	47.0000	9.89949	2
		Total	39.7368	9.06668	19
	SSCE	Trading	35.7857	6.53015	14
		Civil Service	30.8333	6.96898	6
		Others	39.4167	9.11999	12
		No job	27.3333	3.05505	3
		Total	35.4571	8.12890	35
	Primary	Trading	37.0638	6.57864	47
		Civil Service	33.5000	4.46094	6
		Others	39.1765	8.57369	51
		No job	37.8276	7.63015	29
		Total	37.8797	7.60187	133
	Not Educated	Trading	34.7143	3.72891	7
		Others	36.6429	7.70222	14
		No job	40.2778	7.90983	18
		Total	37.9744	7.45685	39
	Total	Trading	36.4247	6.19121	73
		Civil Service	35.6842	7.94462	19
		Others	38.7805	8.68946	82
		No job	38.4231	8.16340	52
		Total	37.6770	7.81151	226

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Table 2: 3-WAY ANCOVA Model for Gender, Education and Occupation on Loneliness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2588.965[a]	29	89.275	1.571	.039	.189
Intercept	4447.526	1	4447.526	78.248	.000	.285
Age	159.362	1	159.362	2.804	.096	.014
Gender	63.828	1	63.828	1.123	.291	.006
Education	557.154	3	185.718	3.267	.022	.048
Occupation	316.692	3	105.564	1.857	.138	.028
Gender * Education	71.579	3	23.860	.420	.739	.006
Gender * Occupation	106.654	3	35.551	.625	.599	.009
Education * Occupation	582.480	8	72.810	1.281	.255	.050
Gender * Education * Occupation	453.115	7	64.731	1.139	.340	.039
Error	11140.455	196	56.839			
Total	334549.000	226				
Corrected Total	13729.420	225				

For table 2 above, age demonstrates no significant difference $F(1, 196) = 2.804$, $p = .096$. Similarly, gender does not exhibit a statistically significant association with loneliness ($F(1, 196) = 1.123$, $p = .291$, Partial Eta Squared = .006), indicating that gender alone may not be a strong determinant of loneliness.

In contrast, education showed significant difference on loneliness $F(3,196) = 3.267$, $p = .022$. Partial Eta Squared = .048 suggests small effect size for education on loneliness. Mean score (see table 3) showed that older adults with secondary education had less loneliness when compared to

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other levels of education. Pairwise comparison (see table 4) showed significant difference between for tertiary education as compared to other levels of education.

Occupation also does not exhibit a significant difference in loneliness ($F(3,196) = 1.857$, $p = .138$, Partial Eta Squared = .028), implying that occupation alone may not be a strong determinant of loneliness.

The interaction effects between gender and education ($F(3, 196) = .420$, $p = .739$, Partial Eta Squared = .006), gender and occupation ($F(3, 196) = .625$, $p = .599$, Partial Eta Squared = .009), education and occupation ($F(8, 196) = 1.281$, $p = .255$, Partial Eta Squared = .050), and the three-way interaction ($F(7, 196) = 1.139$, $p = .340$, Partial Eta Squared = .039) showed no statistical significance.

Table 3: Mean Scores for Education on Loneliness

			95% Confidence Interval	
			Lower	
Education	Mean	Std. Error	Bound	Upper Bound
Tertiary	40.199[a]	2.062	36.131	44.266
SSCE	32.559[a]	1.635	29.335	35.783
Primary	36.787[a]	.954	34.905	38.669
Not Educated	36.518[a,b]	1.769	33.029	40.008

Table 3 above showed mean score for education variables on loneliness. The table showed that participants with secondary education were less lonely when compared with other levels education.

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The mean loneliness scores varied across education levels, with distinct patterns observed. Individuals with Tertiary education reported the highest mean loneliness score (M = 40.199, SE = 2.062, 95% CI [36.131, 44.266]), followed by those with Primary education (M = 36.787, SE = 0.954, 95% CI [34.905, 38.669]). Participants with SSCE qualifications reported a lower mean loneliness score (M = 32.559, SE = 1.635, 95% CI [29.335, 35.783]), while those who were Not Educated had a similar mean loneliness score (M = 36.518, SE = 1.769, 95% CI [33.029, 40.008]) to those with Primary education. The confidence intervals suggest variability in loneliness scores within each education level.

Table 4: Pairwise Comparison for Education on Loneliness

(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Difference[d]	
					Lower Bound	Upper Bound
Tertiary	SSCE	7.640*	2.625	.024	.644	14.636
	Primary	3.412	2.275	.812	-2.651	9.475
	Not Educated	3.681	2.730	1.000	-3.595	10.957
SSCE	Tertiary	-7.640*	2.625	.024	-14.636	-.644
	Primary	-4.228	1.902	.164	-9.297	.840
	Not Educated	-3.959	2.454	.649	-10.499	2.581
Primary	Tertiary	-3.412	2.275	.812	-9.475	2.651
	SSCE	4.228	1.902	.164	-.840	9.297
	Not Educated	.269	1.995	1.000	-5.049	5.586
Not Educated	Tertiary	-3.681	2.730	1.000	-10.957	3.595
	SSCE	3.959	2.454	.649	-2.581	10.499
	Primary	-.269	1.995	1.000	-5.586	5.049

- Shows significance at $p<0.05$

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Table 4 was on the pairwise comparison for the education variables on loneliness. Overall, the data suggests that tertiary education participants differed significantly from other levels of education.

DISCUSSION

This study is one of the first, if not the first in Sub-Saharan Africa to demonstrate the demographic determinants of loneliness in older adults in Nigerian sample using the Revised UCLA 20-item Scale. Here the result was able to show how gender, occupation and education level differs significantly in loneliness in older-adult samples. From the analysis of results, the first hypotheses that there will be no gender differences on loneliness among older-adult persons in Ukpo, Anambra state was confirmed because both the males and the females have a significance of .418, which is greater than the typical significance level of .05, indicating that the difference is not statistically significant.

Conversely, while this study reported no significant difference in loneliness with respect to gender, Olawa et al., (2019), reported a statistically significant difference in gender in South West Nigeria after removing covariates like family support and no significant difference in gender if covariates like widowhood is excluded. Srivastava et al., (2020) reported that gender differed significantly in loneliness in an Indian sample with added covariates like marital status, employment status and household heads. A plausible explanation to the difference between the findings of this study and that of Olawa et al., (2019) could be the nature of assessment used for the two studies. Olawa et al., (2019) utilized the 3-item loneliness scale by Hughes et al., (2004) for their study while this study utilized the complete item (20 item) R-UCLA. Srivastava et al., (2020) included covariates to the variable, but there were no separate results on only the variable.

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Theoretically, this finding affirms the assumption that cognitive mechanisms such as social skills, levels of self-esteem as implied by Peplau and Pelman (1982) alleviate loneliness. Fostering self-esteem and enhancing social skills among older-adult goes a long way in allievating loneliness, irrespective of gender.

The second study hypothesized that occupation will not significantly differ on loneliness among older-adult sample of Ukpo, Dunukofia Local Government of Anambra State. The hypotheses was confirmed. This study showed no significant difference in occupation, it showed a significance of .13, which is greater than the typical significance level of .05, indicating that the difference is not statistically significant. Based on the data, individuals who are not employed (No job) and individuals who fall into the "Others" category tend to have reported higher levels of loneliness compared to those in Trading or Civil Service occupations.

Studies like Morrish, and Medina-Lara, (2021) have reported consistent positive association between unemployment and heightened loneliness across all studies in their review. Kim et al., (2021)'s study on Korean Older adults also revealed that the absence of significant social roles in later life (such as marital and occupational status) was associated with heightened loneliness, with the broader characteristic of social networks serving as a mediator in this connection. As much as the findings from these studies are not in alignment with the findings of the present study, it still addresses the results of the covariates of the variable in the present study, which agrees with Morrish, and Medina-Lara, (2021) and Kim et al., (2021) that individuals who are not employed (No job) and individuals who fall into the "Others" category tend to report higher levels of loneliness.

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In line with this result, Weiss (1973) claims that social loneliness stems from a perceived scarcity of social connections. Factors such as unemployment, retirement can trigger social loneliness. This could mean that as per the study, traders who have a higher social interaction in the course of their business may tend to be less lonely.

The third hypotheses which states that Education Level will not significantly differ on loneliness in older-adult persons in Ukpo, Dunukofia Local Government of Anambra state was not accepted. This study showed that loneliness significantly differed with respect to level of education. From the data, individuals with higher levels of education (Tertiary) reported higher levels of loneliness compared to those with lower levels of education (SSCE, Primary, and Not Educated).Individuals with secondary education report the lowest mean loneliness score, followed by those who are not educated and those who have primary education. This may be attributed to various factors, including differences in social networks, support systems, and cultural influences across educational backgrounds. For example, while this study showed a significant difference of $p = 0.02$ ($p < 0.05$), Balki et al., (2023) reported a higher prevalence of loneliness among older-adults living in the United Kingdom, who are educated. This prevalence was found after variables such Psychological Resilience and Technological Usage were removed. Conversely, Sum and his colleagues (2015) reported a low prevalence of loneliness on retirees with higher educational achievement.

Theoretically, this study affirms Carstensen et al., (1999)'s Socioemotional Selectivity Theory that elderly individuals not only engage with a smaller number of individuals but predominantly interact with those they are already familiar with. This can be linked to the urban-rural migration

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of older adult retirees who had tertiary level of education. This migration tends to affect their level of social interaction and networks, support systems and cultural differences and interpretation.

The fourth study hypothesize that there will be no significant interaction effect of gender, occupation and level of education on loneliness among the older-adult samples. This hypothesis was confirmed. This study showed no significant interaction of gender, occupation and level of education. The interaction of the three variables together shows a significance of 0.3.

Conclusion

This study contributes to our understanding of the role of demographic variables of loneliness, specifically focusing on the understanding of gender disparities in loneliness, occupational differences in loneliness and the difference in education level and loneliness. The findings revealed the importance of considering educational factors in addressing loneliness and promoting well-being among individuals.

This study also suggested that educational level significantly differs in loneliness among older adults of our study sample. It further suggests that individuals with higher levels of education (Tertiary) reported higher levels of loneliness compared to those with lower levels of education (SSCE, Primary, and Not Educated). Individuals with SSCE qualification report the lowest mean loneliness score, while those with Primary education reported similar mean loneliness score with Not Educated people.

Recommendations

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With respect to the findings of this study, the researcher recommends that:

1. This same study should be conducted among older-adults in urban areas for comparison of the result obtained from this study.
2. Retirees with tertiary education are recommended to get to know their local area and familiarize themselves with those in the neighbourhood.
3. Older adults more especially those with tertiary education are advised to take assessment of loneliness during their usual clinic visits at the geriatric center.
4. Social groups in the churches, village town hall etc. should be created for older-adults in communities.

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