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Relationship between Psychological Distress and Abuse among Rural Elderly People

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ABSTRACT

Background: Psychological distress and abuse are significant concerns among rural elderly people due to various socio-economic and environmental factors. Psychological distress, including anxiety and depression . While abuse, whether physical, emotional, or financial, remains underreported in rural areas due to social stigma and fear of retaliation. **Aim:** To investigate psychological distress and abuse among rural elderly people. **Design:** A descriptive research design was utilized. **Sample**: A purposive sample of 230 elderly plus 23 elderly enrolled in pilot study and excluded from the main study sample. **Tools:** Three tools were used for data collection namely; tool 1 :structured interview composed of three parts demographic characteristics , medical history and abuse exposure, tool 2 The Hwalek-Sengstock Elder Abuse Screening Test (HS-EAST) , and tool 3 Kessler Psychological Distress Scale (KPDS-10). **Results:** More than half 51.7 of the studied elderly had high abuse and neglect, 28.6 of them had moderate one while only 19.7 of them had low abuse and neglect. **Conclusion:** The current study concluded that, more than half of the studied elderly had high abuse and neglect while only 19.7 of them had both low abuse. More than one third of elderly had total sever psychological distress. **Recommendations:** The elder abuse education and outreach program for elder people to identify and prevent elder abuse, neglect and exploitation.

Keywords: Psychological distress, abuse, elderly people, rural

INTRODUCTION

Population ageing is a global phenomenon. In 2050, the number of persons aged 60 years and over is estimated to reach 2.1 billion worldwide, constituting the majority from today's developing countries and most of them exposed to abuse **(Raj & Nath, 2023)** .and an estimate of 320 million older people would have been victims of elder abuse. **(Khalil, 2022)**.

The World Health Organization defines elder abuse as 'a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person**. (Raj&Nath, 2023).** Elder abuse can be in different forms, such as physical, sexual, emotional/ psychological, financial, abandonment, neglect, and institutional maltreatment **(Atim, et al, 2023).**

Abuse can impact the well-being of older persons, decreasing their quality of life, leading to mental health challenges, and increasing morbidity and mortality rates **(Atim et al., 2023)**.

Additionally psychological wellbeing is important for health and aging. Distress comprises a variety of symptoms in older adults include depression, anxiety, suicide, fear, stress and sleep problems**(Alraddadi, 2022)**. It has an impact on self steem and expectation of trust. The risk of psychiatric disturbance after a subsequent

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stressor has been examined post-traumatic stress disorder **(Li&Dong,2022).**

Nurses have an important role in elder abuse in a clear understanding of what is elder abuse and what action is needed, and they improve policy, legislation and practice to ensure older people's safety, autonomy, equality and equity **(Phelan, 2018)**.

Elder abuse of older adults is a major global public health and societal issue that has been associated with a variety of negative health outcomes .the worldwide prevalence of elder abuse among older adults is 15.7 in the community. Research found that elder abuse of older adults is associated with increased risks of mortality, morbidity, health care utilization, and need for placement in long-term facilities. **(Atim, etc, 2023).** Community based studies conducted amongst the elderly have reported a 'psychological distress prevalence rate ranging from 8.9 to 62.16'. Individuals with distress have a 1.52 times higher chance of mortality than the general population.

Aim of the study

This study aimed to investigate psychological distress and abuse among rural elderly people.

This aim will be fulfilled through the following objectives:

- Determine psychological distress level among rural elderly people.
- Identify the prevalence of elder abuse among rural elderly people
- explore the relationship between elder abuse and psychological distress among rural elderly people

Research Questions:

- What is psychological distress level among rural elderly people?
- what is the prevalence of elder abuse among rural elderly people?
- Is there a relationship between elder abuse and psychological distress among rural elderly people?

Methods

Research design:

The research method used for this study was descriptive design.

The study setting *:*

Setting

The existing study was conducted at El Ghar village , Sharqia governorate, which was selected by using a multistage cluster sampling technique as follow*:*

- First stage (Selection of district) *:*The study was conducted in Sharkia Governorate, which consists of 21 district. The researcher used multistage random cluster sampling technique to pick up one district, it was Zagazig district*.*
- Second stage (Selection of village) *:*The researcher selected one district in Zagazig city randomly
- Third stage (Selection of participants) *:* The selected village was divided into seven areas and four areas were selected randomly. Each area was divided into streets and four streets were selected randomly from each area. Finally, the researcher picked up eight houses from each street by the random sampling method. Then all eligible older adults according to inclusion criteria in the randomly selected houses who accept to participate in the study were included in the study sample till reaching the calculated sample size.

Participants

A purposive sample of 230 elderly plus 23 elderly enrolled in pilot study and execluded from the main study sample.

Tools of data collection:

Interview questionnaire sheet used , it consisted of three tools:

Tool I:

This structured interview was designed by the researcher and consisted of the following three parts

Part 1:

Demographic characteristics of the studied elderly : entails data about demographic characteristics of the studied elderly which consisted of 10 questions to collect data about age, gender , marital status ,educational level , Job before retirement ,current job , no of children , living with , monthly income , Healthy home environment **(Questions from 1-10)**.

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Part 2: Medical history: This part was developed by the researcher and consisted of two questions to collect data about **Suffering** from chronic diseases, In case of yes, what are the chronic diseases, Suffering from physical disabilities , In case of yes, what is the disability **(questions from 11-12)**.

Part 3: Questions to assess abuse exposure and its types adopted from **Meit (2007)**, who classified it into 4 types ; **Neglect**, **Physical abuse, Psychological abuse and Financial abuse**

Scoring system:

High abuse: ≥ 70

Moderate abuse: 50-70

Low abuse :< 50

Tool II:

The Hwalek-Sengstock Elder Abuse Screening Test (HS-EAST) developed by Melanie Hwalek(1991),was used to screen and identify elder abuse and neglect .

The scale consists of 15 items and three conceptual categories. These three conceptual categories include three domains

Scoring system:

- ✓ The score is from 0 to 15, and if this score is greater than 3 out of 9 questions, at least the risk of abuse is exposed. A higher score indicates a higher likelihood of abuse
- ✓ A response of "no" to items 1, 6, 12, and 14; a response of "someone else" to item 4; and a response of "yes" to all others is scored in the "abused" direction.

Tool III:

Kessler Psychological Distress Scale (KPDS-10): is a simple measure of psychological distress developed by **Ronald C Kessler (2003)**.

The K10 scale involves 10 questions about emotional states each with a five-level response scale

Scoring system

Each item is scored from one 'none of the time' to five 'all of the time'. Scores of the 10 items are then summed, yielding a minimum score of 10 and a maximum score of 50.Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress.

- K10 Score: Likelihood of having a mental disorder (psychological distress)
- 10 - 19 Likely to be well
- 20 - 24 Likely to have a mild disorder
- 25 - 29 Likely to have a moderate disorder
- 30 - 50 Likely to have a severe disorder

1. **Content validity*:***

For testing the content validity of the study tool, three experts; one professor in community health nursing from Zagazig university, one assistant professor in community nursing from Zagazig university and one professor in community medicine faculty of medicine, Zagazig university from Zagazig university revised it and some modifications were done according to their opinions. The content validity of the study tools was measured to evaluate the individual items as well as it is relevant and appropriate to test what they wanted to measure.

2. **Reliability:**

Internal consistency of the tools was assessed calculating Cronbach alpha co efficient , their reliability to be satisfactory as shown by the values of Cronbach alpha coefficient in the following table :

	Cronbach alpha
Total presence of abuse and neglect	0.82
Total abuse type exposure	0.80
Total psychological distress	0.91

3. **Pilot study**

A pilot study was carried out on a sample of 23 elderly randomly selected from the selected village. The aim was to test clarity of the instructions, the format of the questionnaire, comprehension of the items, and to estimate the exact time required for filling the questionnaire sheet. The necessary modifications were done based on the analysis of the pilot study to develop the final format. The participants involved in the pilot study were excluded in the main study sample*.*

4. **Ethical considerations*:***

Firstly, the study proposal was approved by the research Ethics committee (REC) and post graduate committee of the faculty of Nursing at

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Zagazig University. Then, oral informed consent for participation was obtained from each subject after full explanation of the aim of the study. Participants were given the opportunity to refuse participation and they were notified that they could withdraw at any stage of filling the questionnaire sheet and anonymity of each elderly was protected by the allocation of code number for each elderly, they were assured that the information would be confidential and use for research purpose only.

5. Field work

Once the permission was granted to proceed with the study, the researcher started to prepare a schedule for collecting the data. Each elderly was interviewed individually by the researcher who introduced herself and explained the aim of study briefly, and reassured them that information obtained is strictly confidential and would not be used for any purposes other than research. After that, the oral approval was obtained to collect the necessary data. The researcher used to go to el Ghar village for interviewing the elderly who fulfilling the criteria. The study tools were answered by each elderly during the interview and the time needed ranged from 25 to 30 minutes, according to understanding and cooperation of the elderly. The field work was executed over Six months from the beginning of October 2023 to the end of march 2024, two days per week (Saturday and Friday) from 12 pm to 6 pm.

I. Administration Design :

Before starting any step in the study, an official letter containing the aim of the study was issued to faculty of nursing Zagazig University to mayor of el ghar village explaining the nature and aim of this study and seeking facilitating the role of researcher and the mayor sent a guide with the researcher to help in identifying the elderly people in the village.

II. Statistical design

Data collected from the studied sample was revised, coded and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, percentages and Mean SD. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. Chi-square (χ^2) is a statistical test used to determine the relationship between categorical variables. Multiple linear regression is a model for predicting the value of one dependent variable based on two or more independent variables.

Significance of the results:

- Highly significant at p-value < 0.01.
- Statistically significant was considered at p-value < 0.05
- Non-significant at p-value ≥ 0.05

Results: -

Table 1: shows that the studied elderly' mean age was $\bar{x}$ S.D 68.75±4.28 and 52.6 of them had ages ranging between 60 to 65 years old. Moreover, 69.1 of them were males and 71.3 of them were married. As regards their educational level, 39.1 of them had bachelor degree. Concerning their jobs, 59.6 of them worked at private sector before retirement and about the current job, 68.3 of them reported not working. As regards their monthly income, 75.2 of them reported that it was not enough.

Table 2: states that 87.8 of studied elderly suffered from chronic diseases and who stated suffered from chronic diseases mentioned diabetes (76.2) and hypertension (68.8). Moreover, only 1.3 of the them suffered from physical disabilities in extremities.

Table 3: reveals that 48.3 of the studied elderly had total high abuse exposure, 30.9 of them had total moderate abuse exposure and 20.8 of them had total low abuse exposure. And so, they had total high exposure regarding neglection (61.7), psychological maltreatment (57.4) and financial maltreatment (58.3) while 51.3 of them had moderate exposure to physical maltreatment

Figure 1: reveals that 43.2 of the studied elderly had total sever psychological distress, 30.2 of them had total moderate psychological distress while 24 of them had total mild psychological distress and only 2.6 of them were psychologically well .

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Table 4 :states distribution of the studied elderly according to presence of abuse and neglect. They reported supporting someone (75.7), being sad or lonely often (67), feeling uncomfortable with

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anyone in family (65.7), feeling that nobody wants them around (77.8), someone in family make them stay in bed or tell them they are sick when they know they are not (74.8), someone forced them to do things they didn't want to do (66.5), someone toke things that belong to them without their O.K (59.6), someone told them that they give them too much trouble (51.7) and someone close to them tried to hurt or harm them recently (70). On the other hand, they didn`t report having anyone spends time with them, taking them for shopping or to the doctor (73), ability of taking own medication and get around by themselves (71.3), having someone in family drink a lot (68.3), trusting most of the people in their family (71.7) and having enough privacy at home (73.9). Moreover 60 of them reported making decisions about their lives by someone else.

Figure 2: presents that 51.7 of the studied elderly had high abuse and neglect, 28.6 of them had moderate one while only 19.7 of them had low abuse and neglect.

Table 5: elicits that, there is a highly statistically significant positive correlation between the studied elderly' total presence of abuse and neglect and their total abuse types exposure and total psychological distress at (p= 0.000). Moreover, there is a highly statistically significant positive correlation between the studied elderly' total abuse type exposure and total psychological distress at (p= 0.000). Also, there is a statistically significant positive correlation between the studied elderly' total psychological distress at (p= 0.05)

Table (6) declares a statistically significant independent positive predictors of total abuse exposure screening were marital status, living with whom and abuse exposure type. The module explains 28% of the variation; none of the other variables affected their total abuse exposure screening.

Table (7) figures a statistically significant independent positive predictors of total psychological distress were age, marital status, living with whom and type of abuse exposure. The module explains 24% of the variation; none of the other variables affected their total psychological distress.

Table (1): Percentage distribution of the studied elderly according to their demographic characteristics (n=230).

Demographic characteristics	N	
Age		
60-<65	121	52.6
66-<70	94	40.9
>70	15	6.5
$\bar{x}$ S.D 68.75±4.28		
Gender		
Male	159	69.1
Female	71	30.9
Marital status		
Married	164	71.3
Divorced	13	5.7
Widow	53	23.0
Educational level		
Illiterate	13	5.7
Read and write	43	18.7
Primary education	84	36.5
Bachelor education	90	39.1
Job before retirement		
Governmental	93	40.4
Private	137	59.6
Current job		
Don`t work	157	68.3
Non-craft worker	11	4.8
Craft worker	19	8.3
Professional work (doctor, teacher…….)	24	10.4
Employer	13	5.7
Business man	6	2.6
Monthly income		
Not enough	173	75.2
Enough	41	17.8
Enough and saving	16	7.0

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Table (2): Percentage distribution of the studied elderly according to their medical history (n=230).

Items	N	
Suffering from chronic diseases		
Yes	202	87.8
No	28	12.2
***In case of yes, the diseases are (no= 202)**		
Diabetes	154	76.2
Hypertension	139	68.8
Kidney diseases	32	15.8
Liver diseases	11	5.4
Suffering from physical disabilities		
Yes	3	1.3
No	227	98.7
In case of yes, the disability is (no. 3)		
Extremities of upper or lower limbs	3	100

***Not mutually exclusive**

Table (3): Types of abuse exposure among studied elderly (n=230).

Total abuse exposure	High		Moderate		Low	
	N		N		N	
Neglection	142	61.7	57	24.8	31	13.5
Physical Maltreatment	36	15.7	118	51.3	76	33.0
Psychological Maltreatment	132	57.4	53	23.0	45	19.6
Financial Maltreatment	134	58.3	56	24.3	40	17.4

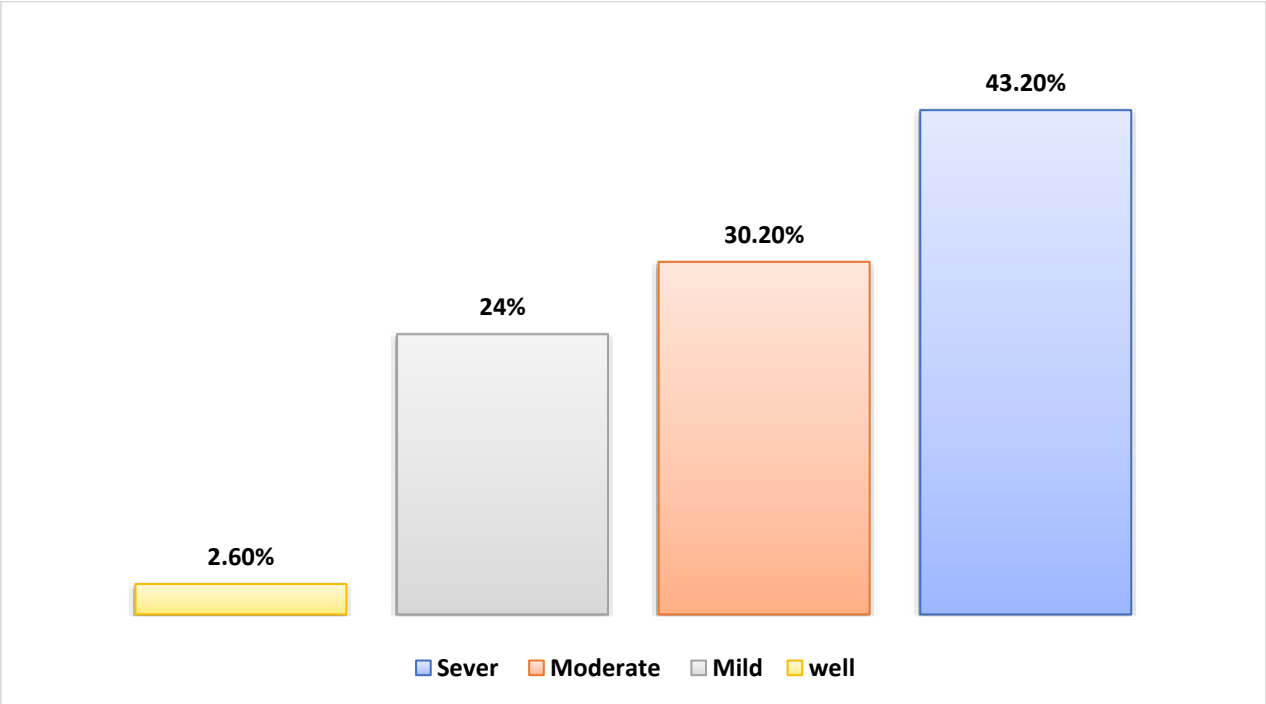

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Figure (1): level of psychological distress among studied elderly (n=230).

Table (4): Percentage distribution of the studied elderly according to presence of abuse and neglect (The Hwalek-Sengstock Elder Abuse Screening) (n=230).

Items	Yes		No	
	No		No	
Having anyone spends time with them, taking them for shopping or to the doctor	62	27.0	168	73.0
Helping to support someone	174	75.7	56	24.3
Being sad or lonely often	154	67.0	76	33.0
Feeling uncomfortable with anyone in family	151	65.7	79	34.3
Ability of taking own medication and get around by themselves	66	28.7	164	71.3
Feeling that nobody wants them around	179	77.8	51	22.2
Someone in family drink a lot	73	31.7	157	68.3
Someone in family make them stay in bed or tell them they are sick when they know they are not	172	74.8	58	25.2
Someone forced them to do things they didn't want to do	153	66.5	77	33.5
Someone toke things that belong to them without their O.K	137	59.6	93	40.4
They trust most of the people in their family	65	28.3	165	71.7
Someone told them that they give them too much trouble	119	51.7	111	48.3
Having enough privacy at home	60	26.1	170	73.9
Someone close to them tried to hurt or harm them recently	161	70.0	69	30.0
	By self		Someone else	
Makes decisions about their life	92	40.0	138	60.0

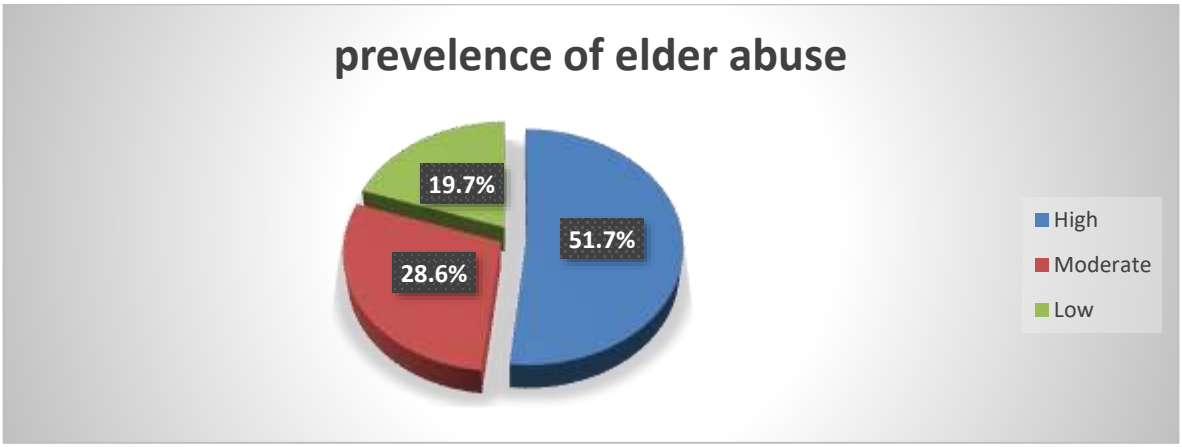

Figure (2): Prevelance of elder abuse among studied elderly people (n = 230)

Table (5): Correlation between the studied variable (n=230).

		Total presence of abuse and neglect	Total abuse type exposure	Total Psychological Distress
1. Total presence of abuse and neglect	**r**			
	p			

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2. Total abuse type exposure	**r** **p**	.853 .000**		
3. Total Psychological Distress	**r.** **p**	.798 .000**	.821 .000**	

(**) Statistically significant at p<0.01. r Pearson correlation

Table (6): Multiple Linear regression model for the studied elderly` total abuse exposure screening.

	Unstandardized Coefficients		Standardized Coefficients	T-test	P-value
	B	Std. Error	Beta		
(Constant)	2.419	.119		3.511	.001
Marital status	1.984	.013	.423	2.356	.023
Living with (Alone)	1.789	.019	.314	3.789	.014
Abuse exposure type	2.301	.017	.265	2.796	.021

R Square = .28 Model ANOVA: F=12.500, p=0.001

Table (7): Multiple Linear regression model for the studied elderly` total psychological distress.

	Unstandardized Coefficients		Standardized Coefficients	T-test	P-value	95.0 Confidence Interval for B	
	B	Std. Error	Beta			Lower	Upper
(Constant)	1.245	.152		3.241	.001	13.45	36.84
Marital status	1.123	.101	.432	2.865	.03	19.31	27.65
Living with (Alone)	.953	.091	.265	3.546	.001	15.63	31.24
Type of abuse exposure	1.203	.112	.513	4.123	.000	16.87	32.84

R Square = .24 Model ANOVA: F=11.312, p=0.001

Discussion:

Regarding demographic characteristics of the studied elderly, the present study demonstrated that the studied elderly' mean age was 68.75±4.28 years and more than half of them ranged in age between 60 to 65 years old. This might be related to this age group was the targeted population for this study and might reflect a demographic trend or an increasing population within this age range. This result was in the same line with a study carried in India by ***Sathya & Premkumar, (2020)*** who reported that more than half (61.9) of the studied elderly aged from 60 to 69 years old. On the other hand, this result disagree with a study carried in West Bengal by ***Sembiah et al., (2020)*** who revealed that the mean age of the respondents was 71.82 years (SD=9.85).

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This contradiction may be related to variations in demographic composition between different regions and populations.

In addition, the present study showed that more than two thirds of the studied elderly were males and less than three quarters of them were married. This result was supported by ***Xue et al., (2022)*** who conducted a study in China stated that slightly more than half (50.79) of the studied participants were males and most of them (82.54) were married. In the opposite line, a study carried out by ***Jing et al. (2020)*** in China who showed that more than half of the studied elderly (53.5) were females.

Additionally, the current study found that nearly two fifths of the studied elderly had bachelor degree. This finding reflects the interest in education in rural areas.

On the other hand, another findings were reported by ***Gregory et al. (2024)*** in Canada, found that the majority of the sample (79.38) had a post-secondary degree or diploma. These findings were against the results of the study in West China, conducted by ***Ge et al., (2020)*** who reported that the highest percentage of the studied participants (38.2) had Primary school. This discrepancy might be due to historical and socio-economic factors influencing educational access and attainment in rural areas. Limited access to educational facilities, lack of transportation infrastructure, and economic constraints might contribute to a higher proportion of rural elderly individuals having only attained basic education. Additionally, cultural norms and expectations could play a role, with priorities placed on practical skills over formal education in some rural communities.

As for jobs, the current findings of the study showed that more than half of the studied elderly worked at private sector before retirement and about the current job, more than two thirds of them reported not working. This may be due to a variety of factors such as retirement age, disability, or personal choice or lack of governmental jobs in Egypt. The current findings indicating that a significant portion of this demographic is no longer actively engaged in the workforce. This result was confirmed by a study in Iran by ***Aajami et al. (2020)*** who showed that more than half of the studied elderly (58.6) were employed in private sector before retirement, while most of them (81.8) were Unemployed. Also, this result agreed with a study in India, carried out by ***Muhammad et al. (2021)*** and found

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that nearly three quarters (72) of participants were not working.

These findings align with research carried out by **El-Khawaga et al. (2021)** in Egypt, which reported that two-thirds (66.5%) of participants found their income insufficient. Conversely, a study by **Mousa et al. (2023)** in Egypt indicated that the majority of elderly participants (71.8%) were satisfied with their income. This contrast may stem from socio-economic differences between the study populations, such as variations in financial support systems, employment history, or regional cost-of-living disparities.

Part II. Elderly medical history.

The present study illustrated that most of the studied elderly suffered from chronic diseases. This may be attributed to the fact that aging naturally increases the risk of chronic conditions due to the gradual decline in physiological function. This result was compatible with a study carried by ***Moustaka et al. (2023)*** in China found that the more than two thirds (69.1) of the studied elderly suffered from co-morbidity. In the same line, ***Tsoy et al. (2019)*** in Kazakhstan, whose study stated that most of the studied elderly (87.7) suffer from chronic diseases.

Additionally, the present study revealed that more than three quarters of the studied elderly stated suffered from diabetes and more than two thirds had hypertension. Moreover, minority of them suffered from physical disabilities in extremities. A similar finding was reported in China by ***Jia et al. (2020)*** and stated that the highest percentage of the studied elderly (64) had diabetes and more than half of them (58.3) had elevated blood pressure. Conversely, a study done in North China by ***Wang et al., (2021)*** stated that about half of the the studied sample (57.9) suffered from hypertension, more than half of them (56.4) had physical dependence, while minority of them (8.4) suffered from diabetes.

Part 3 :abuse exposure types among the studied elderly, the current study indicated that more than three fifths of them exposed to high neglection. Also, more than half of them exposed to high psychological maltreatment and high financial maltreatment, more than half of them exposed to physical maltreatment. The high rates of neglect can be attributed to the demanding nature of care giving, which can overwhelm family members and professional caregivers, leading to inadequate attention and care.

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Additionally, psychological maltreatment might stem from caregivers' frustrations or lack of training in handling elderly patients, leading to emotional abuse. Financial maltreatment is often linked to the elder's dependency on others for financial management, creating opportunities for exploitation. Physical maltreatment may result from impatience or misunderstanding of the elder's needs and conditions. Additionally, societal attitudes that undervalue the elderly can contribute to the prevalence of these abuses, reflecting a broader issue of ageism and lack of support systems for the aging population.

The current study finding was in agreement with a study performed by ***Santos et al., (2021),*** in Portugal and found that, more than half of the studied elderly (53.5) exposes to high neglect level, also nearly two thirds of them (65.1) exposed to high psychological abuse, more than two thirds of them (68.7) exposed to high financial abuse and more than three quarters of them (79.3) exposed to moderate physical abuse. On contrary, ***Aslan & Erci, (2020)*** whose study noticed that neglect and psychological abuse at an intermediate level among more than half of the studied elderly (56.5). This might be due to important role of caregiver for elderly people.

Another study carried out by **Özer & Tanriverdi, (2023)** in Turkey declared that more than half of the studied elderly, followed by neglect (35.6), economic abuse (21.9) and physical abuse (3.8). As well, a study conducted by ***Khalili et al., (2022)*** found that the highest rate of elder abuse was observed regarding psychological abuse (40.8), and the lowest rate was measured for neglect (15.4) and physical abuse (12.4). In addition, a study performed by ***Sadrollahi et al., (2020)*** in Iran who found that more than two fifths of the studied elderly (45) experienced high psychological abuse, financial abuse (45.6), and more than one fifth of them (22.2) experienced physical abuse. This might be due to different study sample characteristics and different cultures between countries .

Tool 2 . Kessler Psychological Distress Scale (KPDS-10).

Pertaining the studied elderly Psychological Distress, the present study represented that more than two thirds of the studied elderly had total sever psychological distress, less than one third of them had total moderate psychological distress, while almost one quarter of them had total mild psychological distress and

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minority were psychologically well. This may be due to the multifaceted challenges faced by the elderly population, which include physical health decline, social isolation, financial insecurity, and the loss of loved ones. These stressors can significantly impact their mental well-being, leading to a high prevalence of severe psychological distress.

These findings were parallel a study by ***Olasupo et al., (2021),*** conducted in Nigeria and reported that more than two thirds (68.5) of older adults reported high levels of psychological distress, correlating with increased rates of depression and anxiety. Likewise, a study in India carried out by ***Sathya et al., (2024),*** reported that more than half of the studied elderly (54.2) had high level of psychological distress.

In the opposite line, these findings were against ***Lotfalinezhad et al., (2019)*** who performed a study in Iran reported that less than one fifth of the studied elderly (13) were likely to have a severe psychological distress, while nearly two thirds of them (64) were likely to be well. Also, ***Jing et al., (2020)*** whose study in China declared that more than half of the studied elderly (56.9) had low psychological distress level.

Conversely, ***Amridi & Vimala, (2024)*** who conducted a study in India stated that about two fifths (40.2) of the elderly people show symptoms of depression with nearly one third of them (32.7) showing mild depressive symptoms and minority (7.5) of the individuals showing moderate depressive symptoms. As well, ***Srivastava et al., (2021)*** who carried out a study in India, the study identified nearly one quarter (23.5) of the older population experiencing higher levels of psychological distress. Another study in Canada by ***Menec et al., (2020)*** who noticed that most of the studied elderly (87.2) had low psychological distress level, while less than one fifth of them (12.8) had high level of psychological distress.

Additionally, psychological maltreatment might stem from caregivers' frustrations or lack of training in handling elderly patients, leading to emotional abuse. Financial maltreatment is often linked to the elder's dependency on others for financial management, creating opportunities for exploitation. Physical maltreatment may result from impatience or misunderstanding of the elder's needs and conditions. Additionally, societal attitudes that undervalue the elderly can contribute to the prevalence of these

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abuses, reflecting a broader issue of ageism and lack of support systems for the aging population.

The current study finding was in agreement with a study performed by ***Santos et al., (2021),*** in Portugal and found that, more than half of the studied elderly (53.5) exposes to high neglect level, also nearly two thirds of them (65.1) exposed to high psychological abuse, more than two thirds of them (68.7) exposed to high financial abuse and more than three quarters of them (79.3) exposed to moderate physical abuse. On contrary, ***Aslan & Erci, (2020)*** whose study noticed that neglect and psychological abuse at an intermediate level among more than half of the studied elderly (56.5). This result reflects important role of caregiver for elderly people.

Abuse and neglect Screening. Tool 3 :

According to presence of abuse and neglect among the studied elderly, the present study portrayed that slightly more than three quarters of them reported helping to support someone, while about two thirds of them reported being sad or lonely often and feeling uncomfortable with anyone in family, respectively. This may be due to the multifaceted emotional and social challenges associated with care giving responsibilities. The discomfort reported with family members might stem from strained relationships and the pressures of balancing care giving with other familial obligations, leading to a sense of disconnection and lack of support within their immediate social network.

In the same context, this result was supported by a study carried by ***Aminalroaya et al., (2020)*** in Iran found that majority of the older adults (60) replied “Yes” to “Are you helping to support someone?”. On contrary, a study in Turkey by ***Kulakçı et al. (2020)*** reported that about three quarters of elderly (75.2) of the studied elderly mentioned that they were not sad or lonely and most of them (89.6) reported not feeling uncomfortable with family and added that this may be due to they were capable of living with their spouses without being dependent on others.

As well, the current study reflected that around three quarters of the studied elderly feeling that nobody wants them around and someone in family make them stay in bed or tell them they are sick when they know they are not, respectively. While, about two thirds of them reported that someone forced them to do things they didn't want to do. This may be due to elderly individuals who frequently

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experience social isolation and diminished social roles, leading to feelings of worthlessness and rejection. Additionally, family dynamics can play a significant role; caregivers might feel overwhelmed or burdened, resulting in abusive behaviors such as unnecessary bed rest or manipulation of the elderly perception of their health.

Consistently, a study performed by ***Sezer et al., (2021)*** in Turkey found that more than two-thirds of the elderly (67.3) reported that someone in family make them stay in bed or tell them they are sick when they know they are not. These findings contradicted with a study in Iran carried out by ***Hazrati et al., (2020)*** who found that most of the participants (84.4, 91.9) reported they don't feel that nobody wants them around and there was no one who forced them to do things they did not want to do, respectively.

Additionally, the current study showed that more than half of the studied elderly reported that someone toke things that belong to them without their O.K and someone told them that they give too much trouble, while more than two thirds of them reported that someone close to them tried to hurt or harm them recently. This finding highlights the critical need for improved protective measures, social support, and monitoring systems to safeguard the well-being of older adults.

These results were based on similar study conducted in Iran by ***Nemati et al. (2023)***, which stated that more than three quarters of the studied elderly (74.2) reported having someone close to them tried to hurt or harm them recently. Conversely, ***Aslan, & Erci, (2020)*** who conducted a study in Turkey found that most of the elderly (88.4) stated that nobody taken things that belong to them without their consent and (89.2) nobody tell them that they give too much trouble.

The present study represented that more than two thirds of the studied elderly didn't report having anyone spends time with them taking them for shopping or to the doctor and reported inability of taking their own medication and get around by themselves, respectively. This may be attributed to the fact that, as individuals age, they often experience a decline in their mobility and overall health, making it difficult for them to manage daily activities such as shopping, visiting the doctor, or taking their own medication. These findings were in harmony with a study conducted by ***Khalili et al. (2022)*** in Iran, presented that about three quarters of elderly (75.4) reported that they had experienced abuse.

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As well, the current study showed that more than two thirds of the studied elderly stated that they have someone in family drink a lot and stated that they don't trust most of the people in their family, respectively. Similarly, these findings were consistent with a study conducted by ***Mohseni et al., (2019)***, in Iran, who found that more than half of the studied older adults (51.4) reported abuse.

Furthermore, the present study clarified that nearly three quarters of the studied elderly reported that they haven't enough privacy at home. In addition, three fifths of them reported making decisions about their lives by someone else. This may be related to various social and familial dynamics that often affect elderly individuals. Lack of sufficient privacy at home can stem from living arrangements where space is limited, shared with multiple family members, or designed without considering the specific needs of older adults.

Additionally, this findings indicate a possible dependence on caregivers or family members, which can be attributed to physical or cognitive decline, cultural norms, or lack of empowerment and autonomy in their daily lives. These factors collectively highlight the need for improved living conditions and greater emphasis on respecting and supporting the autonomy of elderly individuals.

This result contradicted with a previous study conducted in Turkey by ***Cevik et al., (2023)*** who stated that one fifth of the studied elderly (20) reported abuse. Also, ***Sahin & Erkal, (2018),*** who carried out a study in Ankara found that most of the studied elderly (86.8) reported that no one in their family drink a lot and (87.6) reported that they make decisions about their life- like how you should live or where you should live by themselves

Considering total abuse and neglect among the studied elderly, the current study results revealed that more than half of them had high abuse and neglect, more than one quarter of them had moderate abuse and neglect, while almost one fifth of them had low abuse and neglect. This may be due to socioeconomic constraints, caregiver stress, and lack of adequate support systems can significantly exacerbate the vulnerability of elderly individuals to maltreatment. Additionally, the deterioration of physical and cognitive functions commonly associated with aging may impede their ability to advocate for themselves, making them easy targets for abuse and neglect .

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In the same context, a study in Iran performed by Mohseni et al. (2019) and stated that more than half (51.4%) of the elderly reported high level of abuse. Likewise, a previous study carried by Papi et al., (2022) who noticed that more than half (55.2 %) of the studied elderly reported high abuse. In the opposite line, these findings disagreed with El-Khawaga et al., (2021) whose study in Egypt found that less than half (46%) of the studied elders were highly abused. Also, Sembiah et al., (2020) who conducted a study in India and declared that about one quarter (25.6%) of the respondents had experienced high abuse

Regarding answering the third research question : is there a relationship between elder abuse and psychological distress among rural elderly people?', the current study reflected significant positive correlations were found between the studied elderly' total presence of abuse and neglect, total abuse types exposure and total psychological distress. This can be interpreted as experiences of abuse and neglect can significantly impact mental well-being and cognitive functioning. Exposure to various forms of abuse, such as physical, emotional, or financial, often leads to elevated psychological distress, which in turn can exacerbate or contribute to cognitive decline.

The present study finding agreed with ***Sathya et al. (2024)*** in India whose study found a significant positive association of elder abuse with psychological distress suggesting the adverse role of elder abuse on psychological distress among older adults. In the same context, ***Pengpid & Peltzer, (2021)*** in India stated that elder abuse is an important determinant of poor health conditions such as depression, psychological distress and sleep problems.

Regarding relationship between demographic characteristics of studied elderly and their total abuse screening, the present study revealed that there was a highly statistically significant relation with their marital status . Moreover, there was statistically significant relation with their monthly income .

From the research investigator point of view, this can be interpreted as marital status and living arrangements directly influence the level of social support and care elderly individuals receive, which can impact their vulnerability to abuse. Married individuals may have better support systems, reducing the likelihood of abuse. Conversely, those living alone or in unstable living conditions may be more

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susceptible to abuse. Additionally, factors such as monthly incomecan affect the ability of elderly individuals to protect themselves and seek help, further influencing their risk of abuse.

Concerning relationship between demographic characteristics of the studied elderly and their total abuse type experience. The present study illustrated that there was a highly statistically significant relation with their age, marital status and living with. Moreover, there was a statistically significant relation with their gender and monthly income.

This can be explained as the lack of significant relation with educational level, job before retirement, chronic disease, and physical disabilities indicates that these factors do not independently predict the type of abuse experience among the elderly in the studied population. Another study reported similar results done at Egypt by ***Mwaheb et al., (2023)*** who revealed that the studied elderly abuse exposure type was significantly associated with their age, gender, marital status and monthly income.

This result was supported by a study in Turkey performed by ***Kulakçı & Korkmaz, (2020)*** and found that there was significant association between the studied elderly abuse exposure type and their age, income, and who they living with. On contrary, a study carried out by ***El-Khawaga et al., (2021)*** stated there was significant relation between the exposure type of abuse among the studied elderly and their chronic diseases, physical disability and previous work.

As regard relationship between demographic characteristics of studied elderly and their total psychological distress, the present study indicated that there was statistically significant relation with their age, marital status, living with and monthly income. Moreover, there was a statistically significant relation with their gender, chronic disease and physical disabilities. This may be due to older age can be associated with increased health challenges and social isolation, contributing to higher levels of psychological distress.

In addition, marital status and living arrangements impact the availability of social support, with those who are married or living with others potentially experiencing lower distress due to companionship and assistance. Financial stability, reflected by monthly income, provides access to healthcare and recreational activities that can alleviate stress. Gender differences may stem from varying social roles and coping

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mechanisms, while the presence of chronic diseases and physical disabilities directly affects daily functioning and quality of life, thereby increasing psychological distress ***(Audinarayana & Nirmalasaravanan, 2021).***

Also, a study performed by ***Sathya et al., (2024)*** in India whose study found that there was significant association between psychological distress level of the studied elderly and their age, sex, marital status, wealth quintile and multimorbidity. In addition to , this result was in agreement with ***Lotfalinezhad et al., (2019)*** whose study in Iran found that elderly sex, subjective income, and chronic disease were significantly associated with psychological distress.

As regard multiple linear regression model for the studied elderly' total abuse exposure screening, the present study displayed that statistically significant independent positive predictors of total abuse exposure screening were marital status, living with whom (alone) and abuse exposure type. From the research investigator point of view, this may be attributed to elderly individuals who are single, divorced, or widowed may lack the protective support of a spouse, making them more susceptible to abuse. Those living alone are often more isolated, which can increase their risk of abuse and decrease their likelihood of having abuse detected by others. Additionally, different types of abuse (physical, emotional, financial, etc.) may vary in visibility and severity, influencing both the likelihood of occurrence and the probability of being reported or identified ***(Yalçın et al., 2023).***

In the same line, ***Hazrati et al., (2020)*** in Shiraz whose study stated that elderly' marital status (widowed) and living alone were positive predictors of abuse. Consistently, a study conducted by ***Sezer et al., (2021)*** in Turkey reported that abuse risk was higher among older people who lived alone, were abused physically or emotionally before and who were widowed.

Pertaining multiple linear regression model for the studied elderly' total abuse exposure screening, the current study demonstrated that statistically significant independent positive predictors of total abuse types of exposure were marital status and living with whom. This may be due to the fact that age, marital status, and living arrangements are closely associated with elderly vulnerability and social support dynamics.

This result was Similar to ***Papi et al., (2022)*** in Iran whose study declared that single elderly people reported a higher

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rate of elder abuse. Also, a study carried out by ***Sánchez et al., (2024)*** in Ecuador who affirmed that age and living alone (P= 0.034) were significantly contributed to abuse among elderly.

Considering multiple linear regression model for the studied elderly' total psychological distress, the current study demonstrated that statistically significant independent positive predictors of total psychological distress were marital status, living with whom and type of abuse exposure. This can be explained as elderly who are older in age, single, living alone and exposed to various types of abuse are more likely to have high psychological distress level. In the same context, this result was supported by a study carried by ***Lotfalinezhad et al., (2019)*** in Iran declared that marital status, and living alone were significantly associated with psychological distress. Likewise, a study by ***Olasupo et al. (2021)*** in Nigeria reported that psychological distress was influenced by abuse towards older adults.

Conclusion

Based on the results of the present study and the research questions, the study concluded that:

According to the present study findings:

It can be concluded that more than half of the studied elderly had high abuse and neglect while only 19.7 of them had both low abuse. More than one third of elderly had total sever psychological distress. Moreover positive significant correlations were found between the studied elderly' total presence of abuse and neglect, their total abuse types exposure and total psychological distress.

Recommendations

On the basis of the current study findings, the following recommendations are suggested:

- The elder abuse education and outreach program for elder people to identify and prevent elder abuse, neglect and exploitation.
- Periodical assessment for psychological distress level in elderly people and early intervention by different stress management techniques.
- Further studies to assume study results.

References:

Acierno R, Watkins J, Hernandez-Tejada MA, et al. Mental Health Correlates of Financial Mistreatment in the National Elder Mistreatment Study Wave II. J Aging Health. 2019. https://doi.org/10.1177/0898264318767037.

Aslan, H., & Erci, B. (2020). The incidence and influencing factors of elder abuse and neglect. Journal of Public Health, 28, 525-533.

10.48047/jocaaa.2024.33.06.50

Atim LM, Kaggwa MM, Mamum MA, Kule M, Ashaba S, Maling S (2023) Factors associated with elder abuse and neglect in rural Uganda: *PLOS ONE* ; 18(2):e0280826.

Elsherbiny, M.M.K. and R.H. Al Maamari, The effectiveness of logotherapy in mitigating the social isolation of neglected institutionalised older people. British Journal of Social Work, 2018. 48(4): p. 1090–1108.

Evandrou, M.,Falkingham JC, Qin M, *et al.*Elder abuse as a risk factor for psychological distress amongolder adults in India: a crosssectional study. *BMJ Open* 2017;7:e017152. doi:10.1136/ bmjopen-2017-017152

Ferrer RL. Social Determinants of Health. Chronic Illness Care. Daaleman T, Helton M, editors. Cham: Springer; 2018:435–449.

Folstein, M.F., Folstein, S.E., McHugh, P.R., 1975. "Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. J. Psychiatr. Res. 12 (3), 189–198.

Ge, M., Zhang, Y., Zhao, W., Yue, J., Hou, L., Xia, X., ... & Ge, N. (2020). Prevalence and its associated factors of physical frailty and cognitive impairment: findings from the West China Health and Aging Trend Study (WCHAT). Te Journal of nutrition, health and aging, 24(5), 525-533.

Government of South Australia. WHO Progressing the Sustainable Development Goals through Health in All Policies: Case Studies from Around the World. Adelaide: Department for Health and Ageing; 2017.

Gregory, M. A., Schaeffer, M. J., Reeves, J. T., Griffith, L. E., Wolfson, C., Basta, N. E., ... & Canadian Longitudinal Study on Aging (CLSA) Team. (2024). The Effects of Cognitive Ability, Mental Health, and Self-Quarantining on Functional Ability of Older Adults During the COVID-19 Pandemic: Results From the Canadian Longitudinal Study on Aging. Journal of Geriatric Psychiatry and Neurology, 37(4), 307-317.the majority of the sample had a post-secondary degree or diploma

Jia, L., Du, Y., Chu, L., Zhang, Z., Li, F., Lyu, D., ... & Qiu, Q. (2020). Prevalence, risk factors, and management of dementia and mild cognitive impairment in adults aged 60 years or older in China: a cross-sectional study. The Lancet public health, 5(12), e661-e671.

Jing, Z., Li, J., Wang, Y., Ding, L., Tang, X., Feng, Y., & Zhou, C. (2020). The mediating effect of psychological distress on cognitive function and physical frailty among the elderly: evidence from rural Shandong, China. Journal of affective disorders, 268, 88-94.

Jing, Z., Li, J., Wang, Y., Ding, L., Tang, X., Feng, Y., & Zhou, C. (2020). The mediating effect of psychological distress on cognitive function and physical frailty among the elderly: evidence from rural Shandong, China. Journal of affective disorders, 268, 88-94.

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184-189. https://doi.org/10.1001/ archpsyc.60.2.184

Khalili, Z., Ghanbari-Afra, L., Gholipour, F., & Nemati, R. (2022). The Prevalence of Abuse and risk factors associated with elder abuse.

Li, M., Dong, X., 2021. Association between different forms of elder mistreatment and cognitive change. J. Aging Health 33 (3–4), 249–259. https://doi.org/10.1177/ 0898264320976772.

Lotfalinezhad, E., Momtaz, Y. A., Foroughan, M., & Sahaf, R. (2019). Psychological distress among a sample of Iranian older adults. Journal of Gerontology and Geriatrics, 67, 1-7.

Meit, S. S. (2007). Elderly mistreatment. In R. E. Rakel (Ed.), Textbook of Family Medicine (7th ed., pp. 47–65). Philadelphia: Saunders Elsevier

Menec, V. H., Newall, N. E., Mackenzie, C. S., Shooshtari, S., & Nowicki, S. (2020). Examining social isolation and loneliness in combination in relation to social support and psychological distress using Canadian Longitudinal Study of Aging (CLSA) data. PloS one, 15(3), e0230673.

Mobolaji .G , Fagberno .D,(2021) National Association of Social and Applied Gerontology,*journal of aging and long term care* ; 4(3), 41-47

Mohseni, M., Rashedi, V., Iranpour, A., Naghibzadeh Tahami, A., & Borhaninejad, V. (2019). Prevalence of elder abuse and associated factors among community-dwelling older adults

10.48047/jocaaa.2024.33.06.50

in Iran. Journal of elder abuse & neglect, 31(4-5), 363-372.

Mousa Mohamed, N., Shawky Khater, M., Abdelaal Aboseif, H., Mohamed Sabry, R., & Magdy Abdel Kader, R. (2023). Association between perceived stress and Executive Functions among Egyptian elderly. The Egyptian Journal of Geriatrics and Gerontology, 10(1), 58-69.

Moustaka, K., Nega, C., & Beratis, I. N. (2023). Exploring the impact of age of onset of mild cognitive impairment on the profile of cognitive and psychiatric symptoms. Geriatrics, 8(5), 96.

Muhammad, T., Meher, T., & Sekher, T. V. (2021). Association of elder abuse, crime victimhood and perceived neighbourhood safety with major depression among older adults in India: a cross-sectional study using data from the LASI baseline survey (2017–2018). BMJ open, 11(12), e055625.

Mwaheb, M. A., Elsary, A. Y., & Saleh, A. R. (2023). The Prevalence and Risk Factors of Elder Abuse during the COVID-19 Pandemic in the Fayoum Governorate, Egypt. Journal of Forensic Science and Medicine, 9(3), 257-263.

Neale AV, Hwalek MA, Scott RO, Sengstock MC, Stahl C. Validation of the Hwalek-Sengstock Elder Abuse Screening Test. Journal of Applied Gerontology. 1991; 10(4):406–18. https://doi.org/10.1177/07334648910100040

Neale, AV, M Hwalek, MC Sengstock, RO Scott, & C Stahl. "Validation of the Hwalek-Sengstock Elder Abuse Screening Test." *Journal of Applied Gerontology*, 10 (4):417-429 (1991).

Olasupo, M., Fagbenro, D., & Olasupo, M. (2021). Abuse of Older Adults: A Study of the Prevalence and Type of Abuse and Its Relationships to Psychological Distress. Journal of Aging and Long-Term Care, 4(3), 41-47.

Özer, N., & Tanriverdi, D. (2023). Determining depression, abuse, and neglect in elderly individuals. Psychogeriatrics, 23(4), 690-700.

Pak, M. (2020). The prevalence and associated risk factors of elder abuse among older people applied to the family health center in the rural district of Turkey. Social work in health care, 59(4), 236-256.

Papi, S., Akbari, S., Foroughan, M., Zanjari, N., Moghadasi, A. M., & Zandieh, Z. (2022). Prevalence of elder abuse and its related factors among elderly referring to social security outpatient clinic in Yasouj, Iran. Elderly Health Journal, 8(2), 89-97.

Sadrollahi, A., Khalili, Z., Ghorbani, M., & Mahmoodi, M. (2020). The prevalence of various abuse types and their associated factors in the elderly. Journal of Research and Health, 10(1), 59-66.

Salim, A. A., Elsayed, M., Mohamed, M. H., Yousef, H., Hemeda, M. S., Ramadan, A., ... & Elsaid, N. M. A. B. (2024). Prevalence and factors associated with anxiety disorder among married women exposed to violence in rural area, Ismailia, Egypt: A cross-sectional study. Global Epidemiology, 100139.

Santos, A. J., Nunes, B., Kislaya, I., Gil, A. P., & Ribeiro, O. (2021). Exploring the correlates to depression in elder abuse victims: abusive experience or individual characteristics?. Journal of interpersonal violence, 36(1-2), NP115-NP134.

Sathya, T., & Premkumar, R. (2020). Association of functional limitations and disability with elder abuse in India: a cross-sectional study. BMC geriatrics, 20, 1-11.

Sathya, T., Selvamani, Y., Nagarajan, R., & Arumai, M. M. (2024). Association between Multimorbidity and Psychological Distress among Older Adults in India: The Moderating Role of Elder Abuse. Clinical Gerontologist, 1-11.

Sembiah, S., Dasgupta, A., Taklikar, C. S., Paul, B., Bandyopadhyay, L., & Burman, J. (2020). Elder abuse and its predictors: a cross-sectional study in a rural area of West Bengal, eastern part of India. Psychogeriatrics, 20(5), 636-644.

Srivastava, S., Purkayastha, N., Chaurasia, H., & Muhammad, T. (2021). Socioeconomic inequality in psychological distress among older adults in India: a decomposition analysis. BMC psychiatry, 21, 1-15.

Tsoy, R. T., Turuspekova, S. T., Klipitskaya, N. K., Mereke, A., & Cumming, R. G. (2019). Prevalence of mild cognitive impairment among older people in Kazakhstan and potential risk factors: a cross-sectional study. Alzheimer Disease & Associated Disorders, 33(2), 136-141.

10.48047/jocaaa.2024.33.06.50

UN, World Population Ageing 2020 Highlights October, 2020. Available from: https://www.un.org/development/desa/pd/. [Last accessed on 2020 Aug 12].

Wamara CK, Bennich M, Strandberg T: Missing voices: older people's perspectives on being abused in Uganda. *Journal of Elder Abuse & Neglect* 2021, 33(4):288–310. https://doi.org/10.1080/08946566. 2021.1970682 PMID: 34433375

Wang, J., Xiao, L. D., Wang, K., Luo, Y., & Li, X. (2020). Cognitive impairment and associated factors in rural elderly in North China. Journal of Alzheimer's Disease, 77(3), 1241-1253.

World Health Organization. Elder Abuse; 2008. Available from: http://www.who.int/ageing/projects/elder_abuse/en. [Last accessed on 2020Jan 10].

Xie, B., Ma, C., Chen, Y., & Wang, J. (2021). Prevalence and risk factors of the co-occurrence of physical frailty and cognitive impairment in Chinese community-dwelling older adults. Health & social care in the community, 29(1), 294-303.