

How to Cite:

Abdel-Mageed, M. S., Shafik, S. A., & Ahmed, S. M. S. (2022). Informal caregivers' awareness regarding patients with hemiplegia. *International Journal of Health Sciences*, 6(S6), 2664–2679. <https://doi.org/10.53730/ijhs.v6nS6.9847>

Informal caregivers' awareness regarding patients with hemiplegia

Maha Saeed Abdel-Mageed

Clinical Instructor at Nursing School –Ministry of Health

Sahar Ahmad Shafik

Professor of Community Health Nursing, Faculty of Nursing, Fayum University &College of Nursing, National University of Science and Technology, Iraq

Sahar Mahmoud Sayed Ahmed

Assistant Professor of Community Health Nursing, Faculty of Nursing, Helwan University

*Corresponding author email: dsahar100@yahoo.com

Abstract---Background: Hemiplegia is a condition, caused by brain injury that results in a varying degree of weakness, stiffness and lack of control in one side of the body. Aim to assess the informal caregivers' knowledge, practice, attitude and health problems regarding patient with hemiplegia. Design: A descriptive research design was used in this study. Sample: A purposive sample equal (285) informal caregivers' of patients with hemiplegia. Setting: This study was conducted in stroke outpatient clinic in 15 May hospital-Helwan-Egypt. Tools: One tool used interviewing questionnaire sheet composed of 5 parts;(demographic data of patient and informal caregivers', knowledge of informal caregivers' about hemiplegia, the reported practice of the informal caregivers' about the hemiplegia, the attitude of informal caregivers' about the hemiplegia and the informal caregivers' health problems. Results: the study result revealed that 50% of the studied sample had poor knowledge, 40 % of the studied sample had satisfactory practice, 45.0% of them had negative attitude regarding patient with hemiplegia and 75.0% of caregivers complain of health problems, Conclusion: There were half of informal caregivers had average total knowledge regarding hemiplegia ,one third of informal caregivers had poor knowledge, three fifth of studied sample had not reported practice about hemiplegia and there were a highly statistically significant relation between total knowledge score and total reported practices score for their informal caregivers. Recommendations: Developing health educational programs that would help informal caregivers to improve knowledge, practice and attitude regarding patient with hemiplegia.

Keywords---informal caregivers', patients, hemiplegia.

Introduction

Hemiplegia is paralysis of one half of the body-which includes arm, leg and often face on the affected side. It's usually acute in onset and results from upper motor lesion most commonly pyramidal tract lesion associated symptoms and signs aid the diagnosis of level of the lesion. Hemiplegia is one of the most important life-changing events for both survivors and their family caregivers. Family members are expected to take care of hemiplegia survivors at home and to continue treatment and rehabilitation ⁽¹⁾. Hemiplegia may be in right or left side, depending on the side affected. Generally, injury to the left side of the brain will cause a right hemiplegia and injury to the right side a left hemiplegia, the initial treatment for hemiplegic patient, as anticoagulant to reduce neurovascular blockages and decrease the chances of future strokes ⁽²⁾.

The number of people with hemiplegia in upper Egypt is estimated at 8.5/1,000 in the population aged 20 years and more. It increased with advancing age and was higher among males than females among all age groups except in the childbearing period (20 years to <40 years of age). Lifetime prevalence of ischemic stroke (7.2/1,000) was higher than hemorrhagic stroke (1.1/1,000). Hemiparesis and hemiplegia were the commonest presentation of stroke. Headache, vomiting, and vertigo were found to be significantly more common accompaniments of hemorrhagic stroke ⁽³⁾. Informal caregivers were defined as the family members, close relatives, friends, or neighbors who are not trained health professionals, but care for hemiplegia survivor at home irrespective of time limitations and without any payment. The new role of "informal caregiver" is a challenge that creates many difficulties for family caregivers that are not explicit in most studies ⁽⁴⁾.

The caregiver's health is linked to the patient's physical, mental, psychological, and functional condition. Depending on the degree of patient dependency, the possibility of the caregiver experiencing burden, depression, exhaustion, and generally poor health. Caregivers need basic caregiving knowledge and skills to care for hemiplegia patients in view of the various disabilities and potential complications of the hemiplegia. These include performing or aiding the patients in basic activities of daily living such as feeding, mobilizing, toileting, bathing, and dressing ⁽⁵⁾. The community health nursing is responsible for the patient with hemiplegia to facilitate and support patients to receive the right care in the right place at the right time, promoting best practice about why to deal with the patient, facilitating the pathway for patients potentially, administering medication, providing nursing care and continuous monitoring the patient, When the nurse improved awareness for the caregiver that's forward by positive for the patient ⁽⁶⁾.

Significance of the study

Hemiplegia is the third most common cause of death after heart disease and cancer in developed countries. Internationally, stroke has an impact on peoples' lives and therefore, has been gaining the recognition it deserves, both as an acute

and chronic disease. Hemiplegia is considered as one of the leading causes of serious long-term disability in the world. Over 4 million individuals in the world today are living with the effects of hemiplegia. In accordance with the latest WHO data published in 2020, Stroke leading to deaths in Finland is estimated to be 4,322 or 9.41% of total deaths ⁽⁷⁾. According to WHO (2020), with regards to age group, “the occurrence and rate at which hemiplegia increases, is exponential with age. It reaches its peak in older citizens of above 84 years with 73% of stroke incidence experienced in citizens of over 64 years old. It therefore becomes crucial for nursing care of acute stroke and patient’s quality of life to be heightened and improved, in order to acquire a substantial patient’s value of life ⁽⁸⁾.

Aim of the study

This study aimed to assess the informal caregivers’ awareness regarding patients with hemiplegia. Through the following:

- Assessing the caregivers’ knowledge about hemiplegia.
- Evaluating the caregivers’ practice about hemiplegia.
- Assessing the caregivers’ attitude about hemiplegia.
- Assessing the caregivers’ health problems due to care of patient of hemiplegia.

Research Question

- Are the caregivers having knowledge and practice about hemiplegia?
- Are the caregivers having positive attitude when dealing with patient?
- Is there a relationship between caregivers’ knowledge and their practice toward patients with hemiplegia?
- Are the caregivers exposed to problems during providing care to patient with hemiplegia?

Subjects and Methods

Technical Item

The technical item includes research design, setting, subject and tools for data collection.

Research design

A descriptive research design was applied to achieve the aim of this study.

Setting

This clinics in 15 May hospital (Helwan-Egypt). it is separated building of 4 floors and consist of 8 outpatient clinics in different specialist as medical outpatient clinic, general surgery outpatient clinic, ear, nose and throat outpatient clinic, dermatology outpatient clinic, ophthalmology outpatient clinic, cardiac outpatient clinic, endocrine outpatient clinic, orthopedic outpatient clinic, stroke outpatient clinic, chest outpatient clinic and stroke outpatient clinic. The study was

conducted at stroke outpatient clinic in first floor, this clinic provides treatment and follow-up services for patients suffering from hemiplegia. So, choose this place due to it covers a large number of patients suffering from hemiplegia attended to stroke outpatient clinic.

Sampling

A purposive sample was used to achieve the aim of the study. The study sample consists of 285 caregivers. They attending to outpatient clinic during 6 month through the period of the beginning of February 2021 until the end of July 2021. The sample have been selected according to the following inclusion criteria.

- Male and female caregivers.
- Accepted to participate in study.

Sample size

The formula for determining sample size is given as:

$$n = N / [1 + N(e^2)] \quad (\text{Glenn, 1992}).$$

n = Sample size

N = population size 1000

e = 0.05 is the level of precision.

$n = 1000 / (1 + 1000(.0025)) = 285$ was selected.

Tools for data collection

One tool will be used to collect study sample for achieving of study aim:

Tool I: A structured interviewing questionnaire:

This tool was developed by researcher after reviewing the national and international related literature and contains five parts:

- **Part I**
 - **Demographic data** of informal caregiver, this part consists of (10) items as age, gender, home phone, educational level, marital status, place of residence, occupation, income residence and relationship degree.
 - **Demographic data** of patient with hemiplegia, this part consists of (5) items as patient age, gender, place of residence, marital status, and educational level,
- **Part II: Assess informal caregivers' knowledge regarding hemiplegia.**
This part concerned with informal caregiver's knowledge **regarding** hemiplegia, and consists of (13Q) closed ended questions, such as meaning of hemiplegia, causes of hemiplegia, signs& symptoms of hemiplegia, risk factors and complication of hemiplegia
Scoring system: for knowledge questions, a correct answer was scored (Two points) and incorrect answer was scored (One point), while the wrong answer or don't know was given (Zero), Total knowledge scores were classified as follows: The total score knowledge divided into the following:
 - (Good knowledge) $\geq 75\%$,

- (Average knowledge) $\geq 50\%$ - 75%
- And (Poor knowledge) $< 50\%$.
- **Part III : Assessing of informal caregivers' reported practice**, This part consists of (19Q) closed ended questions. as informal caregivers practice about patient's ability to swallow, informal caregivers practice about patients nutrition, Patient's sitting position while eating, patient's skin care, Patient is transferred from one place to another, Showering, How to move a paraplegic patient, prevent muscle tension, positive and negative exercises should be done
- **Scoring system of practice:**
These scores were converted into percentage score. The informal Caregivers were considered done practice, was scored (One point) and had not done practices for patient with hemiplegia was scored (zero point) .
- **Total practice scores** were classified as follows: The total score practice divided into the following:
 - Adequate practice more than 60.0% .
 - Inadequate practice less than 60.0% .
- **Part IV : Assessing informal caregivers' attitude** regarding patient with hemiplegia, This part consists of (9Q) closed ended questions. as informal caregivers were suffering from psychological pressures while caring for sick persons ,unable to adapt to providing care for this person, feel that this person is affecting your relationships with family members or friends in a negative way , many times have you felt the pressure increased until you were unable to overcome it, and feel like you have lost control of your life since this person got sick .Also, the most of caregivers never many times have you felt angry because something happened that you couldn't control
- **Scoring system:** The answers to these questions were scored as "1" for always," "2" for sometimes, and "0" for never.
- **Total attitude scores** were classified as follows: The total score attitude divided into the following:
 - Negative attitude $< 50\%$.
 - Positive attitude $\geq 50\%$.
- **Assessing informal caregivers health problems** as,
- **Psychological problems**, this part consists of (8Q) closed ended questions as,
Many times have you felt that you were unable to control something important in your life, many times have you felt that taking care of this person was a psychological pressure on you, felt confident in the ability to solve problems for you and the patient, many times have you felt that you are aware of everything around you and feel angry when you are near this person.
The part was used for assess caregivers' health problems about patient with hemiplegia. (B) Physical and social problems, this part consists of (6Q) closed ended questions as, Difficult to care for the patient if physical strength requires you. take a long time to complete one of the requirements of this person. Feel that your health has been affected by you feel that you can do more for this person. many times have you hired other people when you can't help that person. you feel that you can take better care of this person.

- **Scoring system:** Total problems were classified into percent scores as (2 points) for never , (1 point) for sometimes and (zero point) for always answers for informal caregivers . Total problems scores were classified as follows: The total score of problems divided into the following:
 - Healthy more than 50%.
 - Un healthy less than 50%.

Validity

The developed tool would be formulated and submitted to three experts in community health nursing (Helwan University) and two from medical surgical nursing (Helwan University) to assess the content validity, needed modifications will be done

Reliability

To assess reliability, the study tools were tested by the pilot subject's reliability for calculating cronbach's Alpha which was knowledge part 0.89 for the interview questionnaire sheet (Appendix I) practice part 0.76 and attitude part 0.88 for sheet (Appendix II).

Ethical considerations

An official permission to conduct the proposed study was being obtained from the Scientific Research Ethics Committee at faculty of nursing Helwan University. Participation in the study was voluntary and subjects was be given complete full information about the study and their role before signing the informed consent. The ethical considerations was include explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs was be respected.

Operational Item Preparatory phase

It was include reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection.

Pilot study

The pilot study has been conducted to test clarity of questions, applicability and understanding of tool. It has been conducted on 10 % of the sample (28) sample. The results of the pilot study helped in refining the interview questionnaire and to schedule the time framework. The participants of pilot were included in the main study sample.

Field work

Data collection of the study was started at the beginning of February 2021 until the end of July 2021. The researchers introduced herself to the patients and their caregivers, explained the aim of the study and its implication and how to fill in knowledge questionnaire, and ensure their cooperation. Informed consent was obtained from the participants. Interviewing patients and their caregivers was carried out in specialized room in the outpatient stroke clinics in 15 May hospital (Helwan-Egypt). The questionnaire sheet took about 30 -45 minutes to complete. Data was being collected at 2days/week (Monday and Thursday from 9am to 12 pm) every week within 6 months. Interviewing questionnaire sheet was be completed by the investigator from each caregiver.

Administrative Item

A written approval letter was being issued from Dean of Faculty of Nursing, Helwan University. The letter was being directed to the director of 15 May hospital Clinics at (Helwan-Egypt) for conducting the study. After explanation of the study aim and objectives, an official permission was obtained from the Dean of faculty of nursing and the general manager of 15 May hospital asking for cooperation and permission to conduct the study.

Statistical Item

Data collected from the studied sample was revised, coded and entered using personal computer (PC). Computerized data entry and Statistical analysis were fulfilled using Statistical Package for the Social Science (SPSS) version 24. Data were presented using descriptive statistic in the form of frequencies, percentages. Chi-square was used for comparisons between qualitative variables. Spearman correlation measures the strength and direction of association between two ranked variables.

Significance of the results

- Statistically significant $p < 0.05$
- Highly statistically significant $p < 0.001$
- Not significant $P > 0.0$

Result

Table (1) Illustrate that, 49.2% of studied caregivers were the age group ≥ 40 years the mean age Mean \pm SD = 41.8 ± 4.8 . Also 72.3% were females and 61.0% of them were married. As well as, 42.4 % of them had technical diploma and 41.8 % of the caregivers not working. Figure (1): Show that, 50.0% of caregivers had average total knowledge regarding Hemiplegia 30.0% of caregivers had poor knowledge, and 20.0% of them had good total knowledge regarding Hemiplegia. Figure (2): Illustrate that, 60.0% of informal caregivers inadequate practices for patient with hemiplegia. While, 40.0% of them adequate practice. Figure (3): Explore that 55.0% of caregivers positive attitude regarding patient with hemiplegia. While, 45.0% of them negative attitude regarding patient with

hemiplegia. Figure (4): Illustrate that, 75.0% of caregivers complain of physical and social problems, 65.0% of them complain of psychological problems. Table (2): Explore that, there were positive relation between informal caregivers total knowledge and total reported practice regarding hemiplegia with statistical significance difference between caregivers knowledge and practice regarding to hemiplegia ($p < 0.001$).

Table 1
Frequency Distribution of the Informal Caregivers according to Demographic Characteristics (no=285)

Demographic characteristics	No	%
Age groups (in years)		
20-30	92	32.3
31- 40	53	18.5
≥40	140	49.2
Mean ± SD = 41.8 ± 4.8		
Sex		
Male	79	27.7
Females	206	72.3
Marital status		
Single	80	28.0
Married	174	61.0
Divorcee	5	1.8
Widowed	26	9.2
Monthly income		
Enough	55	19.3
Not enough	208	72.9
Enough and saved	22	7.8
Level of education of caregivers:		
Read and write	18	6.3
Basic education	97	34.1
Technical diploma	121	42.4
University or more	49	17.2
Caregivers Occupation		
Employed	90	31.5
Hand workers	55	19.3
Retirement	21	7.4
Not working	119	41.8

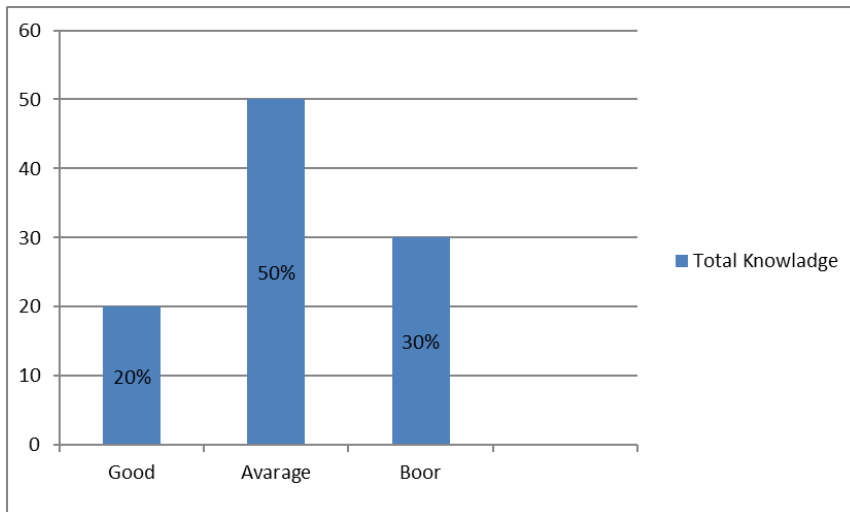


Figure 1. Frequency distribution of informal Caregivers total score of knowledge regarding hemiplegia (No=285)

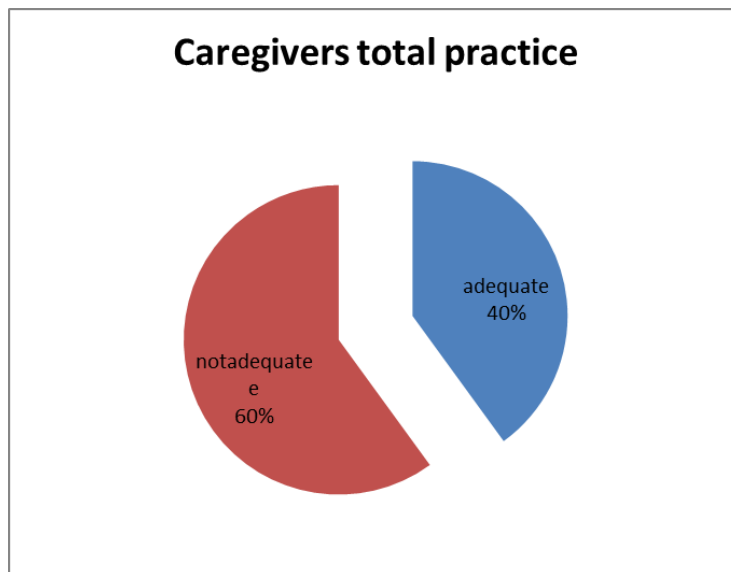


Figure 2. Frequency distribution of Studied informal Caregivers Total reported practice regarding patients with hemiplegia (n=285)

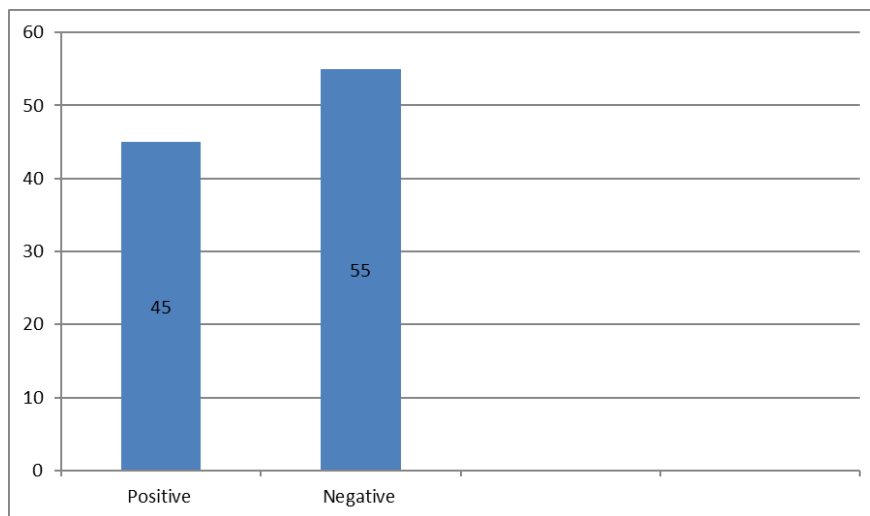


Figure 3. Frequency distribution Studied informal caregivers total attitude regarding patient with hemiplegia (n=285)

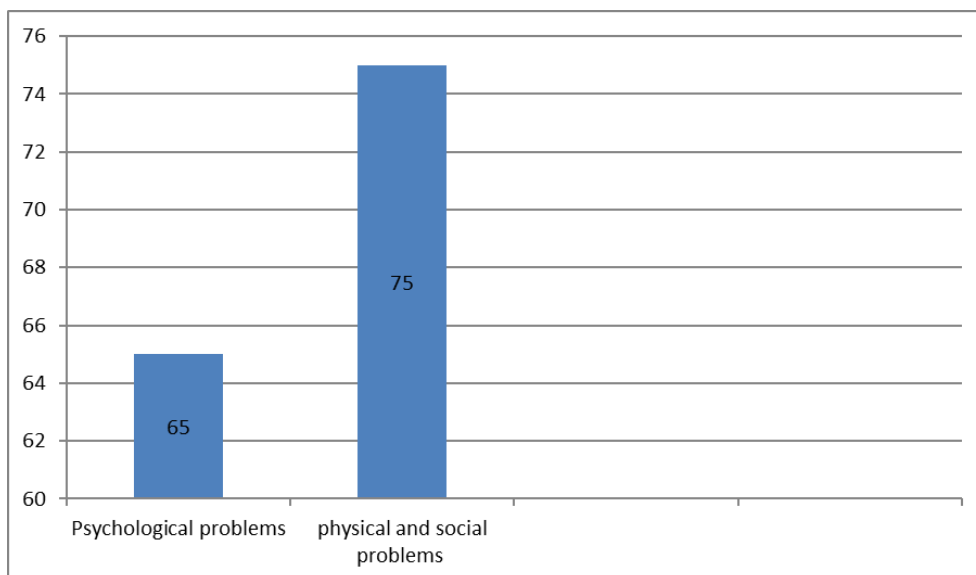


Figure 4. Frequency distribution Studied informal caregivers Psychological, physical and social problems regarding patient with hemiplegia (n=285)

Table 2

Frequency distribution relation between Total Scores of Knowledge and Total Scores of reported Practice for informal caregivers regarding hemiplegia (n=285)

Item	Total reported Practice	
	R	p-value
Total Knowledge	0.322	<0.001

Discussion

Caring for hemiplegia survivor is highly stressful and can negatively affect the caregivers' physical and psychological well-being. Hemiplegia caregivers tend to report more somatic symptoms (fatigue, headache, etc.), depressive symptoms, sleep disorders and social isolation and enjoy less life than non-caregivers *Shinde, et al.*,⁽⁹⁾. Regarding to caregiver age, the current study showed that, more than two fifths of studied caregivers were ages ranged from ≥ 40 years. This result was disagreement with Ueda et al.,⁽¹⁰⁾ whose conduct study in Japan, and entitled as "Incidence and mortality of hemiplegia in Hisayama residents", they found that 85% of participants were age between 30 -<40 years. From the investigator point of view, these results might be suitable age ≥ 40 years for informal caregivers had high sense of responsibilities for caring patients. Concerning to caregivers' gender the results of the current study revealed that, less than three quarters of studied informal caregivers were female. This result was supported with Christensen et al.,⁽¹¹⁾ whose conduct study in England entitled as "Projecting the number of patients with first ever hemiplegia and patients newly handicapped by hemiplegia in England" who stated that, 55% of studied were females compared to males. From the researcher point of view, these results might be due to that suitable for females, because females are more capable of this responsibility than men.

Regarding to informal caregivers marital status, the results of the current study revealed that, three fifth of studied caregivers were married. These results approved with study performed by Bugge et al.,⁽¹²⁾ whose conduct study in Italian, and entitled as "Informal Caregivers and Service Factors that affect Caregiver strain" and found that (equal 85%) of caregivers' patients were married. From the investigator point of view, this result may be due to majority of informal caregivers more than 40 years. Regarding to informal caregivers educational level, the results of the current study revealed that, two fifths of studied caregivers had technical diploma and also less than fifth had university education. This result was congruence with Creedle et al.,⁽¹³⁾ whose conduct study in England, and entitled as "The impact of education on caregiver burden on inpatient hemiplegia unit" they found that 80% caregivers who became had technical diploma and little university education.

Regarding to informal caregivers' occupation, the results of the current study detected that, more than two fifths of studied caregivers were not working. These results agreed with Parag, et al.,⁽¹⁴⁾ whose conduct study in New York USA and entitled as "Extremities pain after hemiplegia A review of the evidence base to inform the development of an integrated pathway", they found that, 45% of caregivers were not working and those who stopped working or doing business in order to care of patient. From the investigator point of view the majority of studied sample were house wife. The finding of the current study showed that, the majority of all informal caregivers had incorrect answer about the disease of knowledge related to meaning of the disease, causes of diseases, Symptom of hemiplegia, risk factors of hemiplegia, These results agreed with Lee, et al.,⁽¹⁵⁾ in Korea and entitled as "A survey of caregivers' knowledge about caring for patient with hemiplegia" who stated that, 85.9% of caregivers with incorrect knowledge. Also, This result was disagreement with Tance, et al.,⁽¹⁶⁾ in Malaysia and entitled as "Providing appropriate information to patients and cares following a

hemiplegia” who stated that 80%, of caregivers had correct knowledge about hemiplegia. From the researcher point of view, these results might be due to the shortage of health education provided to caregivers by qualified healthcare professionals.

Answer research question (Q1) caregivers knowledge regarding hemiplegia

Regarding total knowledge scores of caregivers about hemiplegia, the current study illustrated that one fifth of studied sample had good knowledge about hemiplegia while one third of them poor knowledge about hemiplegia. This result was accordance with Aziz *et al.*,⁽¹⁷⁾ Who conducted a study in South Africa entitled as “The effect of informational support on satisfaction of family caregivers of patients” they found that 35% of informal caregivers had poor knowledge about hemiplegia. Conversely, this result was in disagreement with Park& Jung,⁽¹⁸⁾ Who conducted a study in South Korea entitled as “A study on the effects of modified wheelchair skills program for hemiplegic patients” they found 55% of caregivers had good knowledge about hemiplegia. From the researcher point of view, this result may be due to informal caregivers needed to more information to increase their knowledge about hemiplegia.

Regarding to informal caregivers reported practice about hemiplegia.

Concerning to informal caregivers reported practice about hemiplegia, the current study showed that three fifth of studied all caregivers not done practice about patient's ability to swallow, Patient's sitting position while eating, The patient's skin care, prevent bed sores. This result was in agreement with WILES, *et al.*,⁽¹⁹⁾ whose conduct study in Journal of Advanced Nursing and entitle as “Impact of hemiplegia on functional balance skills of patients ” who stated that, 50% of caregivers not done practice and need a practical information about dressing and bathing and potential resources in the community. From the investigator point of view, these results might be due to that caregivers usually resort to practical care to reduce occurrence any complication for patients. Also, Regarding to caregivers reported practice about hemiplegia, the results of the present study showed that, two fifth of studied caregivers done practice about patient's ability to swallow, Patient's sitting position while eating, The patient's skin care, prevent bed sores, Change patient position, Patient is transferred from one place to another, prevent muscle tension, . These results disagree with ARCHBOLD *et al.*,⁽²⁰⁾ in Washington and entitled as “Caregiver Relief Project National Center for Nursing Research” who stated that, 54% of caregivers done practice. From the researcher point of view, this result may be due to caregivers needed to enhance their skills about practice related to hemiplegia.

Answer research question (Q2), Are the informal caregivers having positive attitude when dealing with patient?

Regarding to informal caregiver's reported attitude for their patients, the results of the present study showed that, more than half of studied all caregivers had been positive attitude regarding patient with hemiplegia, These results disagreement with Tang *et al.*,⁽²¹⁾ in China and entitled as “Prevalence of hemiplegia and' its risk factors in urban china population” who stated that ,The 22% of caregivers

had a positive attitude toward caregiving. From the investigator point of view, these results might be due to that caregivers usually resort to attitude care to reduce psychological problems for the patients. Concerning to informal caregiver's reported attitude for their patients, the results of the present study showed that, more than two fifth of studied all caregivers had been negative attitude regarding patient, such as all caregivers were suffering from psychological pressures while caring for sick persons, unable to adapt to providing care for this person, feel that this person is affecting your relationships with family members or friends in a negative way. These results supported with study performed by Walker, et al.,⁽²²⁾ he entitled as "Informal caregiving to aging family members" noted that the caregivers had many misconceptions as well as negative attitudes towards caregiving. In his study, 40 percent of the caregiving had been negative attitude regarding patient. From the investigator point of view, these results might be due to that caregivers usually have a lot of stress psychological problems.

Answer research question (Q4), Are the informal caregivers exposed to problems during providing care to patient with hemiplegia?

Concerning to informal caregiver's reported psychological problems for their patients, the results of the current study showed that, more than two third of caregivers have psychological problem such as many times have you felt that you were unable to control something important in your life, many times have you felt that taking care of this person was a psychological pressure on you, felt confident in the ability to solve problems for you and the patient, many times have you felt that you are aware of everything around you and feel angry when you are near this person. These results matched with study performed by Pucciarelli et al.,⁽²³⁾ in Journal of Advanced Nursing. And entitled as "Quality of life, anxiety, depression and burden among stroke caregivers: a longitudinal observational study" they mentioned that 70% of caregivers have psychological problems. From the investigator point of view, these results might be due to that the majority of caregivers could have mental illness although, Increase health education to the caregivers.

Concerning to informal caregiver's reported physical and social problems for their patients, the results of the present study showed that, more than three quarter of studied caregivers have physical and social problems. These results supported with Schumacher, et al.,⁽²⁴⁾ and entitled as "Family caregiving skill development" who stated that,77% of caregivers had physical discomfort such as fatigue and exhaustion, especially when elderly patients need assist mobility and carrying out some activities of daily living (ADL). From the investigator point of view, these results might be due to that caregivers usually resort to physical care to reduce occurrence the complication of hemiplegia.

Answer research question (Q3), Is there a relationship between caregivers' knowledge and their practice toward patients with hemiplegia?

Regarding to the relations between total caregiver's knowledge scores of hemiplegia and total caregivers' reported practice scores, the results of the present study illustrated that, there was a statistically significant positive relation between total caregiver's knowledge scores and total caregiver's reported practice.

These results agreed with Given et al.,⁽²⁵⁾ and entitled as “Nurse practitioners: Issues within managed stroke patient” who stated that, there was a highly statistically significant positive relation between total knowledge scores regarding hemiplegia and total caregiver’s reported practice scores. From the investigator point of view, these results might be due to that satisfactory knowledge of caregivers regarding hemiplegia enhances practice toward their patients.

Conclusion

On the light of results of the current study and answers of the research questions, it concluded that, there were half of informal caregivers had average total knowledge regarding hemiplegia ,one third of informal caregivers had poor knowledge, and one fifth of them had good total knowledge regarding hemiplegia Also, three fifth of studied sample had not reported practice about hemiplegia, while two fifth of them had reported practice about hemiplegia , there were more than half of informal caregivers had positive attitude regarding patient with hemiplegia. While, more than two fifth of them had negative attitude regarding patient with hemiplegia. there were three quarter of informal caregivers complain of physical and social problems, more than three fifth of them complain of psychological problems. In addition, there were a highly statistically significant relation between total knowledge score and total reported practices score for their caregivers.

Recommendation

On the light of the results of the current study findings the following recommendations are suggested:

- Disseminating health education booklets to increase informal caregiver’s awareness regarding hemiplegia at outpatient clinics is recommended.
- Developing health educational programs that would help informal caregivers to improve knowledge, practice and attitude regarding patient with hemiplegia.
- Encourage informal caregivers to make group discussion regarding the hemiplegia to exchange experience about the disease under observation from community health nurse.
- Further research on a large sample size and other setting is recommended.

References

1. World Health Organization (WHO) (2020), with regards to age group, “the occurrence and rate at which hemiplegia increases, is exponential with age.
2. Fekadu, G., Chelkeba, L., & Kebede, A. (2019). Risk factors, clinical presentations and predictors of stroke among adult patients admitted to stroke unit of Jimma university medical center, south west Ethiopia: prospective observational study. *BMC neurology*, 19(1), 1-11.
3. El Sayed MM, Adeuja AO, El-Nahrawy E, Olaish MA. Characteristics of stroke in Hofuf, Saudi Arabia. *Ann Saudi Med.* (2021).
4. Triantafillou, J., Naiditch, M and Repkova, K. (2020) : Informal care in the long-term care system. *European Overview Paper.* 2020. Athens/Vienna.

5. Chang, T., Gajasinghe, S and Arambepola, C. (2019) : Prevalence of stroke and its risk factors in urban Sri Lanka population-based study. *Stroke*.2019;46:2965–2968
6. Park, J. M., & Jung, H. S. (2019). A study on the effects of modified wheelchair skills program (WSP) for hemiplegic clients. *Assistive Technology*, 1
7. Andrea, D., Maria, J G., Diane, C., Sally, D., Christi, D., Ian, J., Daniela, L., Gabrielle, M., Theresa M., Felicity, A. 2020. *European Journal of Cardiovascular Nursing*,17(1), 6-22.-8.
8. World Health Organization (WHO) (2020), with regards to age group, “the occurrence and rate at which hemiplegia increases, is exponential with age.
9. Shinde, M and Anjum, S. (2018) : Who are the caregivers and their traits?. *International Journal of Science and Research (IJSR)*, 3(3), 19-27.
10. Ueda, K., Teruo, O and Hirota, Y. (2019) : Decreasing trend in incidence and mortality from stroke in Hisayama residents, Japan. *Stroke*, 12 (2): 154-160
11. Christensen, J., Hearn, J and Bruno, P. (2019) : Projecting the number of patients with first ever strokes and patients newly handicapped by stroke in England and Wales. *British Medical Journal*, 298: 656-660.
12. Bugge, C., Alexander, H and Hagen S. (2020) : Stroke Patient’s Informal Caregivers. Patient, Caregiver and Service Factors that affect Caregiver strain. *Stroke*, 30, 1517-1523.
13. Creedle, C., Leak, A., Deal, A.M., Walton, A.M., Talbert, G., Riff, B and Hornback, A. (2020) : The impact of education on caregiver burden on two inpatient stroke units(2020).
14. Parag, D and Haan, R. (2019) : Shoulder pain after stroke: A review of the evidence base to inform the development of an integrated pathway”. New York, USA: 111-115.
15. Lee, K.W., Choi, S.J and Kim, S.B. (2018) : A survey of caregivers’ knowledge about caring for stroke patients . *AnnRehabil Med*. 2018.
16. Tan, C. E., Hi, M. Y., Azmi, N. S., & Ishak, N. K. (2020). Caregiving self-efficacy and knowledge regarding patient positioning among Malaysian caregivers of stroke patients. *Cureus*, 12(3).
17. Azizi, A., Khatiban, M., Mollai, Z., & Mohammadi, Y. (2018). The effect of informational support on satisfaction of family caregivers of patients with hemiplegic stroke from receiving information. *Scientific Journal of Hamadan Nursing & Midwifery Faculty-ISSN*, 2008, 2819.
18. Park, J. M., & Jung, H. S. (2019). A study on the effects of modified wheelchair skills program (WSP) for hemiplegic clients. *Assistive Technology*, 1-8
19. WILES, R., PAIN, H., BUCKLAND, S. (2019) : Providing appropriate information to patients and carers following a stroke. *Journal of Advanced Nursing*, 2019.
20. ARCHBOLD, P. G., STEWART, B. J. and GREENLICK, M. R. (2020) : Caregiver Relief Project (Grant #5; R01 NR01140), National Center for Nursing Research (Washington, DC), 2020.
21. Tang, W.K., Ungvari, G.S and Chan, G.W. (2019) : Patients' and their relatives' knowledge of, experience with, attitude toward, and satisfaction with electroconvulsive therapy in Hong Kong, China. *European Scientific Journal* August 2020 edition Vol.

22. Walker, D. M., Fletcher-Smith, J., Sprigg, N., & Pandyan, A. (2021). Designing a trial of early electrical stimulation to the stroke-affected arm: Qualitative findings on the barriers and facilitators. *British Journal of Occupational Therapy*, 03080226211008706.
23. Pucciarelli, G., Ausili, D., Galbussera, A.A., Rebora, P., Savini, S., Simeone, S., Alvaro, R. and Vellone, E. (2018) : “Quality of life, anxiety, depression and burden among stroke caregivers: a longitudinal,observational multicentre study”, *Journal of Advanced Nursing*
24. Schumacher, K. L., Stewart, B. J., Archbold, P. G., Dodd, M. J and Dibble, S. L. (2020) : Family caregiving skill: development of theconcept. *Research in Nursing & Health*.
25. Given, B. (2019) : Nurse practitioners: Issues within managed care environment. In J. McCloskey-Dochtermen & H. Kennedy-Grace (Edss), *Current Issues in Nursing*, (6th ed), 358-366. St. Louis, MS: Mosby.
26. Suryasa, I.W., Sudipa, I.N., Puspani, I.A.M., Netra, I.M. (2019). Translation procedure of happy emotion of english into indonesian in kṛṣṇa text. *Journal of Language Teaching and Research*, 10(4), 738–746
27. Suryasa, W. (2019). Historical Religion Dynamics: Phenomenon in Bali Island. *Journal of Advanced Research in Dynamical and Control Systems*, 11(6), 1679-1685.
28. Khidoyatova, M. R., Kayumov, U. K., Inoyatova, F. K., Fozilov, K. G., Khamidullaeva, G. A., & Eshpulatov, A. S. (2022). Clinical status of patients with coronary artery disease post COVID-19. *International Journal of Health & Medical Sciences*, 5(1), 137-144. <https://doi.org/10.21744/ijhms.v5n1.1858>