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Nurses' Attitudes and Practices towards Inpatient Aggression in a Palestinian Mental Health Hospital

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Abstract
Background: Inpatient aggression can occur for many reasons and there are many factors that contribute to this occurrence such as patient factors, staff factors and environmental factors. There are strategies to prevent and manage aggression. **Aims:** The aims of this study are to explore nurse's practices and attitudes of inpatient psychiatric aggression to identify the way the nurses handle aggression by patients and exploring the effects of patients, staff and environmental factors on the occurrence of aggression. **Participants and methods:** The study was conducted at a Mental Health Hospital in Palestine. All nursing staff in the mental health hospital who had worked for at least one year at the time of the study was recruited (67 nurses). The participants ranged in age from 20-50 years with a mean age of (35.1) (±SD = ±7.8) and included 30 females and 37 males. A questionnaire was used which has three scales: Attitude Toward Aggression Scale (ATAS), Management Of Aggression and Violence Scale (MAVAS) and Demographic Scale.**Results:** Nurses were inclined to perceive patient aggression as destructive, violent, intrusive and functional reactions. They were less inclined to view aggression as protective, communicative or acceptable normal reactions. Female nurses in this study were more likely to view aggression as having an intrusive role whereas, on the contrary, male nurses were more likely to view aggression as having a communicative role and they believed that the aggression could be managed in general. Longer professional experience was significantly associated with a higher frequency of the management of aggression in general. Nurses from the admission ward (male and female) were in less agreement with the Protective and Communicative Attitudes scales than the nurses from the other inpatient wards. On the other hand, nurses from admission ward (particularly female) and recovery ward (male and female) had a higher rate of violent and offensive reaction to aggression than nurses from the other wards. The nurses from the chronic female ward had a higher intrusive scale than nurses from the other wards. The highest level of the scientific grade group is a Master of Mental Health with a high level mean regarding the attitudes to the acceptable normal reaction scale, violent reaction scale, functional reaction scale, offensive scale, communicative scale, destructive scale, external causative factors scale, situational/interactional causative factors scale, Management: general, and Management: use of medication. The nurses agree that there are internal, external and interactional factors to inpatient aggression. Nurses believe that patients may be aggressive because of the environment of the psychiatric hospital. Nurses believe that aggression develops because staff does not listen to the patients, there is poor interaction between staff and patients and other people make patients aggressive. Nurses believe in the use of medications, restraint and seclusion widely, on the contrary, they believe in the use of non-physical methods like negotiation and expression of anger. **Conclusion:** This study demonstrates that there are different attitudes of nurses toward patient aggression in psychiatric inpatient settings. This study found that aggression is negatively viewed by Palestinian psychiatric nurses. These attitudes are reflective of the opinions of lay persons in our society. There is a need for training programs to reorient the opinions of nurses in relation to inpatient aggression. These programs should contribute to improved patient care and reduction in the frequency of aggressive acts within inpatient units.
Keywords: Aggression; mental health, nurses; ATAS; MAVAS.

1. Introduction

Nurses are more likely to be involved in an aggressive incident with a patient than other professional health care providers because they have more interaction with the patients compare to the other members of the health team. In developing countries, there is a lack of knowledge and research about the perception of mental illness (Peluso & Blay 2004). The prevalence of violence between psychiatric inpatients ranges from 6.1% to 35% (Grassi, et al. 2001; Haller & Deluty, 1988; Lee, et al . 1987). Whittington, (1994) found an average rate of reported assaults in psychiatric wards of about one every 11 days, while Gournay, et al. (1998) found an average of two assaults per week per ward in a sample of inner-London adult acute wards and psychiatric intensive care units. Approximately two-thirds of the assaults recorded in this survey were directed at nursing staff. Professional skills and alternative methods are needed in dealing with aggressive patients in the right way to avoid the

reflection of aggression from nurses to the patients. There are wrong and aggressive ways that the nurses may use to deal with patients. Thomas, et al. (1995) interviewed inpatients about their direct experience of physically or sexually threatening situations during admission and 71% of the sample (n=59) reported exposure to such incidents, of whom 23 patients (39%) had actually been hit.

Mental health disorders constitute one of the largest – and least acknowledged – health problems in Palestine. Patients with acute psychosis are often characterized by less insight and less tolerance of stress (Levy, et al. 1989). This affects their judgment and anger reaction to reality. Their behavior can cause anxiety in staff members who care for them, although the proportion of violent crimes committed by people suffering from severe mental disorders is small (Angermeyer, 2000).

This study was conducted in a Palestinian Mental Health Hospital, which was opened in 1922, has seven wards, which are: Acute admission ward for males (33 beds), acute admission ward for females (16 beds), chronic ward for males (53 beds), chronic ward for females (42 beds), rehabilitation ward for males (30 beds) and rehabilitation ward for females (33 beds) with a total of 207 beds (Hospital Administration, 2012). Admission wards have acute psychiatric cases and aggressive patients. Rehabilitation wards have the recovered patients who have a stable psychiatric condition. Chronic wards have chronic cases that have psychiatric disorders for a long time and have no shelter. These patients have no communications skills and a low level of functioning, so they need special care. The hospital offers inpatient treatment such as medication, observation, safety for the patient, isolation and restraint, electro convulsive therapy (ECT) for inpatients and outpatients; They use two types of ECT, which are modified ECT and simple ECT, as well as electroencephalography (EEG), and psychological tests which are done by psychologists. They also have a recovery program, which is presented by occupational therapy.

There is a lack of studies on the attitude of nurses toward psychiatric inpatient aggression in Palestine; the present study may provide new evidence of the actual attitudes of nurses toward psychiatric inpatient aggression.

2. Aims

The aims of this study are to explore nurse's practices and attitudes of inpatient psychiatric aggression to identify the way the nurses handle aggression by patients and exploring the effects of patients, staff and environmental factors on the occurrence of aggression.

3. Research questions

Q.1. What is the attitude of nurses toward inpatient aggression?
Q.2. What are the effects of: internal causative factors, external causative factors and situational/interactional factors on the attitude of nurses toward inpatient aggression? This question is from the MAVAS scale.
Q.3. How do nurses manage aggression by patients?
Q.4. What is the relationship between attitude of nurses toward inpatient aggression and their ages, their level of education, their gender, their ward of work, their scientific grade, their job satisfaction and their work shift?
Q.5. What is the relation between practice toward aggression management and nurses ages, and their level of education, gender, ward of work, scientific grade, job satisfaction and work shift?

4. Problem Statements

The incidence of psychiatric patient aggression is reportedly increasing and approaches used to manage patient aggression and violence is under-evaluated. Staff and particularly users' views on this matter are rarely explored.

The reported rise of patient aggression in mental health inpatient settings has been of interest to researchers for some time (Rippon 2000), and a number of theories have been developed that Endeavour to explain the causes. The case for the 'internal model' has been a strong one and numerous studies have explored an association between aggression and illness (Link & Stueve 1995). External model asserts that environmental factors contribute to the incidence of aggression. Issues that have been explored include provisions for privacy and space, location, type of regime and the impact of unit design (Nijman et al. 1999).

A number of studies support the view that negative staff and patient relationships lead to patient aggression (Nijman et al. 1999). Sheriden et al. (1990) found that patients commonly saw conflicts with staff as contributory. Whittington and Wykes (1994a) suggested that certain staff are prone to being assaulted, indicating problematic rather than therapeutic relationships (Harris & Morrison 1995).

Nurses who participated in this study have more interactions with patients without a clear psychiatric policy to control nurse - patients' aggression. So it is important to investigate how they handle these patients and their attitude and practice against aggression of psychiatric patients. It is therefore important to conduct a study to examine the complex interplay of variables and address their impact when managing aggression in healthcare settings.

5. Significance of the study

This study is might be the first of its type in Palestine. Therefore, this study will give baseline data and information about the attitude of nurses toward aggressive psychiatric inpatients. Exploration of the ways the nurses use to deal with aggressive patients and comparison to the right alternative methods may stimulate the administrators and decision makers to perform some of changes in psychiatric settings.

6. Methodology

6.1. Design:

A cross sectional study to provide data on the entire population under study

6.2. Setting:

A Mental Health Hospital in Palestine.

6.3. Study period:

August 2012 to May 2014

6.4. Study population: All nurses (n = 67) who work in a Mental Health Hospital in Palestine.

6.5. Inclusion Criteria

Nurses who work at Mental Health Hospital for a year and more

6.6. Exclusion Criteria

(1) Nurses working in primary mental health centers (2) Nurses who work with less than 1 year experience in hospital.

6.7. Sample size and sampling

A convenience sampling method was adopted, all the mental health care nurses in Mental Health Hospital who have worked at least one year at the time of the study were enrolled, n=67 nurses; 30 female nurses and 37 male nurses.

6.8. Measurement tools

The questionnaire was used which is comprised of three sections:

6.8.1 Section A: A Socio-Demographic Questionnaire: designed by the author to obtain variables such as age, gender, duration of experience in mental health nursing, work shift, job satisfaction, scientific level and work place.

6.8.2 Section B: Attitudes toward aggression scale (ATAS) which was developed by Collins (1994) which consist of 47 statements about aggression, this 47-item self report scale designed for the assessment of staff attitudes toward in-patient aggression. The 47 statements on the ATAS comprise relevant themes on aggression. This scale comprises eight sub-scales: offensive attitude (seeing aggression as unpleasant, hurtful and an unacceptable behavior); communicative attitude (aggression as a signal resulting from a patient's powerlessness aimed at enhancing a therapeutic relationship); destructive attitude (aggression as a threat or act of physical harm); protective attitude (aggression as shielding or defending of physical and emotional space), intrusive attitude (viewing aggression as the expression to damage or injure others), normal reaction (viewing aggression as a normal reaction from the patient because of his mental condition, functional attitude (considering aggression as an opportunity to focus on the patient conditions) and harmful attitude (viewing aggression as an assault reaction).

A total of 67 participants completed the questionnaire. Each question was measured using a 5-point Likert item from "strongly disagree" (1) to "strongly agree" (5). In order to understand whether the questions in this questionnaire were internally consistent, a Cronbach's alpha was run. In this study the ATAS was found to be a fairly reliable questionnaire with a Cronbach's alpha of 0.732. Also, factor analysis was used showed that all the items have an extraction coefficient greater than 0.5. So, it is concluded that the questionnaire has a very high level of validity. The test-retest reliability of the items in the questionnaire used by Collins was 0.972 (Collins, 1994). The permission for the ATAS was obtained from the author through e-mail.

6.8.3 Section C: Management of Aggression and Violence Scale (MAVAS)

The Management of Aggression and Violence Attitude Scale (MAVAS) was developed by Joy Duxbury (2005). It consists of 27 statements about the factors related to and management of aggression and violence according to the attitudes of nurses. It is divided into: Internal causative factors, External causative factors, Situational/interactional causative factors, Management: general, use of medication, use of seclusion, use of restraint, and non-physical methods. Test-retest reliability of the MAVAS revealed a correlation co-efficient of

0.894 using Pearson's r, indicating good reliability.

6.8.4 Validity and Reliability of the Two Questionnaires (Arabic language)

ATAS and MAVAS were translated by a fluent and expert English certificate translator and by a psychiatrist. The validity of the translation was checked by a committee of four experts in: clinical psychology, psychiatry and mental health nursing. The questionnaire was also back translated by an independent researcher as an additional check.

For content validity the questionnaire was tested for its content by ten professional's health team (four psychiatric doctors and four psychiatric nurses, one researcher and one statistician). They were asked to judge whether the questions were appropriate, understandable, reasonable and compatible to the English version. The questionnaire was pretested as a pilot study of ten mental health nurses working in the governmental mental health centers, who completed the questionnaire twice at weekly intervals and the test-retest of the ATAS was 0.732 and the test-retest of the MAVAS was 0.869. These questionnaires of pilot testing were not included in the study.

6.9 Procedures and Data collection

An institutional review board was approved by An-Najah National University specifying the aims, methods, and subjects involved in the research project. The Palestinian Ministry of Health and the administration of the psychiatric hospital were approached by the main researchers and agreed to the study. Data collection was carried out after informed consent from the nurses. Data were obtained by means of questionnaires (ATAS & MAVAS). The way the sample was accessed was a convenient sample. This was a group of nurses working on the wards in a psychiatric hospital where the members of the group were employed for at least one year. Sixty seven nurses from six different psychiatric wards were participated, The anonymous questionnaires were then individually hand delivered by the researcher in the hospital to all nurses working on the selected wards after taking their consent to participate in the study. The questionnaires were accompanied by an information sheet explaining the purpose of the study and endorsing the right of the participants not to participate. After completing the questionnaire, the nurses were requested to return it to the contact person in the hospital.

6.10 Analysis plan

The data were analyzed using the Statistical Package for the Social Sciences (SPSS 17.0 for Windows). The level of significant was $p \leq 0.05$. Descriptive analyses, percentages, means and standard deviations were calculated for socio demographic variables and attitude variables. After collecting questionnaires, the researcher entered the responses into the computer by recoding answers to numeric values, 5 degrees given for strongly agree answers, 4 degrees given for agree answers, 3 degrees given for neutral answers, 2 degrees given for disagree answers and 1 degree given for strongly disagree answers. The Statistical methods used in answering questions:

Frequencies and Percentages to describe the personal variables,

Extraction Coefficients with Factor analysis method to measure the validity of ATAS and MAVAS, Alpha (Cronbach) and Split-half reliability scales to measure the Reliability of MAVAS and ATAS. One sample t- test was used to assess nurses' attitudes and practices toward aggression management. In order to study differences in attitudes by the nurses characteristics variables (age, the years of experience, the scientific degree, the wards of work and job satisfaction), One Way Analysis Of Variance (ANOVA) test was used. In order to study differences in attitudes by the sex variable and work shifts, independent samples T-test was used.

6.11 Ethical Consideration

The study was approved by the Palestinian Ministry of Health, Psychiatric Hospital administration and An-Najah National University's the Institutional Review Board. Dignity, integrity, right to self-determination, privacy, and confidentiality of personal information of the participants were considered. Participants were adequately informed of the aims, methods, any possible conflicts of interest, institutional affiliations of the researcher, the anticipated benefits and potential risks of the study and the discomfort it may entail.

Participants were informed the right to refuse to participate in the study or to withdraw consent to participate at any time without reprisal. Special attention was given to the specific information needs of participants as well as to the methods used to deliver the information. After ensuring that the participants understood the information, the researcher sought the participants' freely-given informed consent in writing. The participants who consented to participate signed an informed consent. Data was collected by using the questionnaire. In addition, Participants were informed that the data would be used only for research purposes. Considerations were based on the Helsinki Agreement (World Medical Association. Helsinki Declaration, 2008) on ethical guidelines for nursing research on volunteerism, to withdraw from the study, potential risks or discomfort, anonymity, confidentiality and contacts for any information needed.

7. Results

Of a total of 67 questionnaires were sent out to the nurses in the mental hospital and 67 questionnaires were subsequently returned (100% response rate).

7.1 Socio-Demographic Characteristics

For gender, 44.8% (n=30) were females and 55.2% (n=37) were males, Their ages ranged between 20 and 50 years, with the mean age for males 35.2 and the mean age for females34.97, Also, the average duration of professional experience was 13.4 (±8.5) years and the duration of professional experience ranged from 1 to 30 years. The demographic and work-related data of the sample are presented in (Table 1).

Regarding age, the percentage of the most common category is > 40, which is 50.7% (Table 1).

For years of experience in the psychiatric hospital, the proportion of the most common category is > 15 years, which is 32.8% (Table 1).

With regard to the ward of work, 25.4% of the participants were in the male admission unit, 16.4% were in the female admission unit, 13.4%were in the female rehabilitation unit, 17.9% were in the male rehabilitation unit, 13.4% in the male chronic unit and 13.4% were in the female chronic unit (Table 1).

67.2% of the participants has a diploma degree, 28.4% has a baccalaureate degree, and 4.5% has a Master of Mental Health (Table 1).

With regard to the job Satisfaction, 32.8% were satisfied, 26.9% were not satisfied, 7.5% did not like to work in this hospital and 32.8% were neutral (Table 1). 13.4% of the participants had morning duty and 86.6% had all shifts (Table 1).

Table.1. Demographic data of the participants

	Variable Category	Frequency	percentages
Age	Less than 30	23	34.3
	30_40	10	14.9
	More than 40	34	50.7
	Total	67	100.0
Years of experience in the psychiatric hospital	1_3 years	12	17.9
	4_8 years	19	28.4
	9_15 years	14	20.9
	Over 15 years	22	32.8
	Total	67	100.0
Sex	Male	37	55.2
	Female	30	44.8
	Total	67	100.0
The ward of work	Male admission unit	17	25.4
	Female admission unit	11	16.4
	Female rehabilitation unit	9	13.4
	Male rehabilitation unit	12	17.9
	Male chronic unit	9	13.4
	Female chronic unit	9	13.4
	Total	67	100.0
Scientific degree	Diploma Degree	45	67.2
	Baccalaureate degree	19	28.4
	Master degree	3	4.5
	Total	67	100.0
Job satisfaction	satisfied	22	32.8
	Not satisfied	18	26.9
	Doesn't like to work in this hospital	5	7.5
	Neutral	22	32.8
	Total	67	100.0
Work shift	Morning	9	13.4
	All shifts	58	86.6
	Total	67	100.0

7.2 Results Based on ATAS

7.2.1 Attitudes toward Inpatient Aggression

As shown in the table (2), the mean scores (± SD) for the sample on each of the eight subscales in the perception of aggression part of the ATAS indicated that they considered inpatient aggression to be: highly destructive; 4.12 (±0.7), offensive; 3.99 (± 0.87), violent reaction; 3.96 (± 80.85), intrusive 3.71 (±0.93), functional reaction; 3.52 (±0.97). All the results of the one sample t- test were statistically significant except acceptable normal reaction (p=0.28).

Table 2: The means and standard deviations for ATA S subscales

Scale	N	Mean	Standard deviation	T	Df	Sig.
a) acceptable normal reaction	67	3.11	0.85	1.08	66	0.28
b) violent reaction scale	67	3.96	0.66	11.88	66	0.00*
c) functional reaction scale	67	3.52	0.70	6.07	66	0.00*
d) offensive	67	3.99	0.74	10.87	66	0.00*
e) Communicative	67	2.63	1.01	-3.02	66	0.00*
f) Destructive	67	4.12	0.68	13.61	66	0.00*
g) Protective	67	3.28	0.95	2.45	66	0.02*
h) Intrusive	67	3.71	0.75	7.75	66	0.00*
Total degree of Perception of aggression	67	3.57	0.47	9.85	66	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as an acceptable normal reaction, one sample t-test was used and the results are as the following: The following items have significant agreement ($p< 0.05$): all human energy necessary to attain one's end, reveals another problem the nurse can take up, is a normal reaction to feelings of anger, an adaptive reaction to anger, must be tolerated. Also, the following items have significant disagreement ($p< 0.05$): improves the atmosphere on the ward; and it is beneficial to the treatment (Table 3).

Table 3. Perception of aggression as an acceptable normal reaction

No	Item	mean	Standard deviation	t	p-value
1	Has a positive impact on the treatment.	3.01	1.11	0.11	0.91
2	Is constructive and consequently acceptable.	2.96	1.08	-0.34	0.74
3	Is all human energy necessary to attain one's end?	3.33	1.20	2.24	0.03*
4	Is necessary and acceptable.	2.84	1.14	-1.18	0.24
5	Reveals another problem the nurse can take up.	3.64	1.08	4.85	0.00*
6	Improves the atmosphere on the ward; it is beneficial to the treatment.	2.70	1.18	-2.07	0.04*
7	Is an acceptable ways to express feelings?	2.75	1.16	-1.79	0.08
8	Is communicative and as such not destructive.	2.84	1.11	-1.21	0.23
9	Is a normal reaction to feelings of anger?	3.51	1.16	3.58	0.00*
10	Is constructive behavior.	2.97	1.18	-0.21	0.84
11	An adaptive reaction to anger.	3.42	1.16	2.96	0.00*
12	Must be tolerated.	3.39	1.11	2.85	0.01*
	Total	3.11	1.17	1.08	0.28

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as a violent reaction, one sample t-test was used and the results are as the following: All items in the table have significant agreement of aggression as a violent reaction ($p<0.05$) (Table 4).

Table 4. Perception of aggression as a violent reaction.

No	Item	mean	Standard deviation	T	p-value
1	Is violent behavior to others and self?	4.03	0.80	10.57	0.00*
2	Is directed at objects or self.	3.99	0.90	9.00	0.00*
3	Is to beat up another person through words or actions.	3.96	0.84	9.28	0.00*
4	Is threatening others.	4.27	0.66	15.62	0.00*
5	Is an inappropriate, non-adaptive verbal/physical action.	3.99	0.83	9.77	0.00*
6	Is a disturbing interference to dominate others?	3.88	0.88	8.20	0.00*
7	Is to hurt others mentally or physically.	3.78	0.93	6.80	0.00*
8	Is a physical violent action.	3.87	0.97	7.32	0.00*
9	Is used as a means of power by the patient.	4.04	0.59	14.53	0.00*
10	Is every expression that makes someone else feel unsafe, threatened or hurt?	3.85	0.89	7.81	0.00*
11	Verbal aggression is calling names resulting in hurting.	3.87	0.95	7.44	0.00*
	Total	3.96	0.85	11.88	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as a functional reaction, one sample t-test was used and the results are as the following (Table 5): All items in the table have significant agreement ($p< 0.05$).

Table 5. Perception of aggression as a functional reaction.

No	Item	mean	Standard deviation	t	p-value
1	Is an expression of emotions, just like laughing and crying?	3.43	0.97	3.64	0.00*
2	Is an emotional outlet.	3.40	0.99	3.35	0.00*
3	Offers new possibilities for the treatment.	3.69	0.91	6.19	0.00*
4	Is an opportunity to get a better understanding of the patient's situation?	3.46	0.93	4.09	0.00*
5	A way to protect yourself.	3.64	0.92	5.73	0.00*
6	Will result in the patient quietening down.	3.48	1.08	3.63	0.00*
	Total	3.52	0.97	6.07	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as an offensive reaction, one sample t-test was used and the results are as the following (Table 6): All items in the table have significant agreement ($p <0.05$).

Table 6. Perception of aggression as an offensive reaction.

No	Item	Mean	Standard deviation	T	p-value
1	is destructive behavior and therefore unwanted	3.97	0.92	8.63	0.00*
2	is unnecessary and unacceptable behavior	3.96	0.86	9.09	0.00*
3	is unpleasant and repulsive behavior	4.12	0.77	11.91	0.00*
4	is an example of a non-cooperative attitude	4.10	0.74	12.20	0.00*
5	poisons the atmosphere on the ward and obstructs treatment	4.03	0.85	9.89	0.00*
6	in any form is always negative and unacceptable	4.01	0.84	9.85	0.00*
7	cannot be tolerated	3.70	1.04	5.50	0.00*
	Total	3.99	0.87	10.87	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as a communicative reaction, one sample t-test was used and the results are as the following (Table 7): The following items have significant disagreement ($p<0.05$), offers new possibilities in nursing care and is the start of a more positive nurse relationship.

Table 7. Perception of aggression as a communicative reaction.

No	Item	Mean	Standard deviation	T	p-value
1	offers new possibilities in nursing care	2.64	1.14	-2.58	0.01*
2	helps the nurse to see the patient from another point of view	2.79	1.25	-1.37	0.18
3	is the start of a more positive nurse relationship	2.45	1.03	-4.37	0.00*
	Total	2.63	1.15	-3.02	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as a destructive reaction, one sample t-test was used and the results were as the following (Table 8): All items in the table have significant agreement ($p < 0.05$).

Table 8. Perception of aggression as a Destructive reaction.

No	Item	mean	Standard deviation	T	p-value
1	is when a patient has feelings that will result in physical harm to self or to others	4.15	0.70	13.40	0.00*
2	is violent behavior to others or self	4.04	0.84	10.15	0.00*
3	is threatening to damage others or objects	4.18	0.78	12.42	0.00*
	Total	4.12	0.77	13.61	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as an offensive reaction, one sample t-test was used and the results were as the following (Table 9): All items in the table have significant agreement ($p < 0.05$).

Table 9. Perception of aggression as a protective reaction.

No	Item	mean	Standard deviation	t	p-value
1	is to protect oneself	3.30	1.04	2.34	0.02*
2	is the protection of one's own territory and privacy	3.27	1.01	2.18	0.03*
	Total	3.28	1.02	2.45	0.02*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression as an intrusive reaction, one sample t-test was used and the results are as the following (Table 10): All items in the table have significant agreement ($p < 0.05$).

Table 10. Perception of aggression as an intrusive reaction.

No	Item	mean	Standard deviation	t	p-value
1	is a powerful, mistaken, non-adaptive, verbal and/or physicalaction done out of self-interest	3.66	0.96	5.59	0.00*
2	is expressed deliberately, with the exception of aggressivebehavior of someone who is psychotic	3.66	0.96	5.59	0.00*
3	is an impulse to disturb and interfere in order to dominate or harm others	3.81	0.87	7.54	0.00*
	Total	3.71	0.93	7.75	0.00*

*The differences are significant at the 0.05 level.

7.3 Results Based on MAVA Scale

After using t-test for MAVA result, the mean scores (± SD) for the sample on each of the eight subscales in the practice of aggression part of the MAVAS indicated inpatient aggression to be highly related to interactional causative factors 3.9 (0.77), external causative factors 3.89 (0.81) and internal causative factors 3.34 (1.18) (Table .11) and that nurses believe in management as the use of seclusion 3.64 (1.01), management as the use of medication 3.58 (1.08), management as the use of non-physical methods 3.5 (1.13), management as the use of restraint 3.37 (1.17) and management in general 3.36 (1.04) (Table.15).

7.3.1The effects of internal, external, situational causative factors on the attitude of nurses toward inpatient aggression? This question is from MAVAS scale.

As noted from the table (11), this table shows that the perception of nurses about the causative factors that increases the inpatient aggression.

Table 11. The number, means and standard deviation for the answers of respondents in the item of Internal, external and situational causative factors.

Scale	N	Mean	T	df	Sig.
i) Internal causative factors	67	3.34	5.02	66	0.00*
j) External causative factors	67	3.98	12.37	66	0.00*
k) Situational/interactional causative factors	67	3.90	12.31	66	0.00*
Total degree of patient factors	67	3.70	12.53	66	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of the aggression's internal causative factors, one sample t-test was used and the results are as the following: All items have significant agreement (p-0.00) except the item (Aggressive patients will calm down if left alone) which has significant disagreement ($p< 0.05$) (Table 12).

Table 12. Perception of aggression's internal causative factor.

No	Item	mean	Standard deviation	t	p-value
1	It is difficult to prevent patients from becoming aggressive	3.46	1.18	3.20	0.00*
2	Patients are aggressive because they are ill	3.57	0.97	4.77	0.00*
3	There are types of patient who are aggressive	3.93	0.88	8.65	0.00*
4	Patients who are aggressive should try to control their feelings	3.40	1.06	3.11	0.00*
5	Aggressive patients will calm down if left alone	2.33	1.17	-4.69	0.00*
	Total	3.34	1.18	5.02	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's external causative factors, one sample t-test was used and the results were as the following: All items in the table have significant agreement ($p <0.05$) (Table 12).

Table 13. Perception of aggression's external causative factors.

No	Item	mean	Standard deviation	t	p-value
1	Patients are aggressive because of the environment they are in	3.85	0.91	7.66	0.00*
2	Restrictive environments can contribute towards aggression	4.13	0.69	13.38	0.00*
3	If the physical environment were different, patients would be less aggressive	3.96	0.81	9.70	0.00*
	Total	3.98	0.81	12.37	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's situational causative factors, one sample t-test was used and the results were as the following: All items in the table have significant agreement ($p <0.05$) (Table 14).

Table 14. Perception of aggression's situational/interactional causative factors.

No	Item	mean	Standard deviation	t	p-value
1	Other people make patients aggressive or violent	3.97	0.70	11.42	0.00*
2	Patients commonly become aggressive because staff do not listen to them	3.72	1.01	5.79	0.00*
3	Poor communication between staff and patients leads to patient aggression	3.81	0.78	8.42	0.00*
4	20. Improved one to one relationships between staff and patients can reduce the incidence of aggression	3.99	0.69	11.77	0.00*
5	23. It is largely situations that can contribute towards the expression of aggression by patients	4.01	0.62	13.50	0.00*
	Total	3.90	0.77	12.31	0.00*

*The differences are significant at the 0.05 level.

7.3.2. Nurses attitudes and practices toward aggression management

From Table (15), it is noted by the results of one sample t-test that the nurses were used different approaches to deal with patients' aggression, Also they use medications, seclusion, restraint and no-physical methods to deal with aggression.

Table 15. The number, means and standard deviation of Management: in general, use of medication, use of seclusion, restraint and non-physical methods.

Scale	N	Mean	Standard deviation	t	df	Sig.
l) Management: general	67	3.36	0.94	3.12	66	0.00*
m) Management: use of medication	67	3.58	0.44	10.82	66	0.00*
n) Management: use of seclusion	67	3.64	0.49	10.61	66	0.00*
o) Management: restraint	67	3.37	0.53	5.69	66	0.00*
p) Management: non-physical methods	67	3.50	0.44	9.22	66	0.00*
Total degree of the nurses attitudes toward the aggression management	67	3.51	0.31	13.55	66	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's management: general, one sample t-test was used and the results were as the following: All items in the table have significant agreement ($p < 0.05$) (Table 16).

Table 16. Perception of aggression's Management: General.

	Item	mean	Standard deviation	t	p-value
1	Different approaches are used on the ward to manage aggression	3.45	1.02	3.60	0.00*
2	Patient aggression could be handled more effectively on this ward	3.27	1.05	2.09	0.04*
	Total	3.36	1.04	3.12	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's management: use of medications, one sample t-test was used and the results were as the following: The following items have significant agreement ($p < 0.05$) (Table 17). Medication is a valuable approach for treating aggressive and violent behavior and prescribed medication should be used more frequently for aggressive patients. But the item (Prescribed medication can sometimes lead to aggression) has significant disagreement ($p=0.00$).

Table 17. Perception of aggression's Management: use of medication.

No	Item	mean	Standard deviation	t	p-value
1	Medication is a valuable approach for treating aggressive and violent behavior	4.04	0.88	9.74	0.00*
2	Prescribed medication can sometimes lead to aggression	2.60	1.00	-3.30	0.00*
3	Prescribed medication should be used more frequently for aggressive patients	4.09	0.54	16.42	0.00*
	Total	3.58	1.08	10.82	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's management: use of seclusion, one sample t-test was used and the results were as the following: The following items have significant agreement ($p < 0.05$) (Table 18): When a patient is violent seclusion is one of the most effective approaches and the practice of secluding violent patients should be discontinued.

Table 18. Perception of aggression's management: use of seclusion.

No	Item	mean	Standard deviation	t	p-value
1	When a patient is violent seclusion is one of the most effective approaches	4.09	0.85	10.52	0.00*
2	The practice of secluding violent patients should be discontinued	3.91	0.69	10.79	0.00*
3	Seclusion is sometimes used more than necessary	2.91	1.03	-0.71	0.48
	Total	3.64	1.01	10.61	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's management: restraint, one sample t-test was used and the results were as the following: The item (Patients who are violent are restrained for their own safety) have significant agreement ($p=0.00$), but the item (Physical restraint is sometimes used more than necessary) have significant disagreement ($p<0.05$) (Table 19).

Table 19. Perception of aggression's management: restraint.

No	Item	mean	Standard deviation	t	p-value
1	Patients who are violent are restrained for their own safety	4.24	0.63	16.10	0.00*
2	Physical restraint is sometimes used more than necessary	2.49	0.89	-4.65	0.00*
	Total	3.37	1.17	5.69	0.00*

*The differences are significant at the 0.05 level.

In order to study the perception of aggression's management: none-physical methods, one sample t-test was used and the results were as the following: These items have significant agreement ($p< 0.05$), alternatives to the use of containment and sedation to manage physical violence could be used more frequently, expressions of anger do not always require staff intervention and negotiation could be used more effectively when managing aggression and violence. Also, the following item have significant disagreement ($p=0.03$), the use of de-escalation is successful in preventing violence (Table 20).

Table 20. Perception of aggression's Management: non-physical methods.

No	Item	mean	Standard deviation	t	p-value
1	Negotiation could be used more effectively when managing aggression and violence	3.30	1.19	2.05	0.04*
2	Expressions of anger do not always require staff intervention	3.81	0.86	7.70	0.00*
3	Alternatives to the use of containment and sedation to manage physical violence could be used more frequently	4.19	0.63	15.43	0.00*
4	The use of de-escalation is successful in preventing violence	2.69	1.13	-2.27	0.03*
	Total	3.50	1.13	9.22	0.00*

*The differences are significant at the 0.05 level.

7.4 Differences in attitudes of nurses towards inpatient aggression by the nurse's characteristics.

7.4.1. Differences in attitudes by the age variable for (ATAS) instruments:

In order to study differences in attitudes by the age variable, One Way Analysis Of Variance (ANOVA) test was used, and the results are as the following: From the table below, the differences by the age are not significant in nurses attitudes toward aggression (table 21).

Table 21. Differences in Nurse's attitudes towards inpatient aggression by the age variable.

(ATAS) Scale	F	Sig.
a) acceptable normal reaction	1.674	0.196
b) violent reaction scale	2.811	0.068
c) functional reaction scale	0.851	0.432
d) offensive	0.316	0.730
e) Communicative	0.926	0.401
f) Destructive	0.976	0.382
g) Protective	1.934	0.153
h) Intrusive	0.833	0.439
Total degree of Perception of aggression	2.802	0.068

*The differences are significant at the 0.05 level.

7.4.2 Differences in nursing attitudes toward aggression by the years of experience variable for ATAS:

In order to study differences in attitudes by the years of experience variable, One Way Analysis Of Variance (ANOVA) test was used and the results are: there are no significant differences in attitude toward aggression by the years of experience variable (Table 22).

Table 22. Differences in nurses' attitudes toward inpatient aggression by the years of experience variable.

(ATAS) Scale	F	Sig.
a) acceptable normal reaction	1.641	.189
b) violent reaction scale	1.602	.198
c) functional reaction scale	1.322	.275
d) offensive	.923	.435
e) Communicative	1.991	.124
f) Destructive	.400	.753
g) Protective	2.471	.070
h) Intrusive	.350	.789
Total degree of Perception of aggression	2.106	.108

*The differences are significant at the 0.05 level.

7.4.3 Differences in nurses' attitudes toward aggression by sex variable for (ATAS):

In order to study differences in attitudes by the sex variable, independent samples T-test was used, and the results are as the following as noted from the table (23), it is noted that the differences by sex are significant only in attitudes toward the Communicative scale (p=0.016) and Intrusive scale (p=0.00), but the differences by sex are not significant in attitudes toward the other scales.

It is clear from the table that the attitudes toward the Communicative scale for males (mean=2.89) are higher than that for females (2.30). The attitudes toward the Intrusive scale for females (mean=4.07) are higher than that for males (3.41).

Table 23.Differences in nurses' attitudes toward inpatient aggression by the sex variable.

Scale	Sex	N	Mean	St.dev	T	Sig.	Mean level
a) acceptable normal reaction	Male	37	3.2027	.77493	.971	.335	medium
	Female	30	3.0000	.93490			medium
b) violent reaction scale	Male	37	3.8919	.48760	-.873	.386	high
	Female	30	4.0333	.82408			high
c) functional reaction scale	Male	37	3.4910	.68375	-.342	.734	high
	Female	30	3.5500	.72602			high
d) offensive	Male	37	3.9189	.73505	-.809	.422	high
	Female	30	4.0667	.75382			high
e) Communicative	Male	37	2.8919	1.00938	2.469	.016	medium
	Female	30	2.3000	.93198			low
f) Destructive	Male	37	3.9910	.68262	-1.824	.073	high
	Female	30	4.2889	.64168			very high
g) Protective	Male	37	3.3919	.87508	1.041	.302	medium
	Female	30	3.1500	1.02680			medium
h) Intrusive	Male	37	3.4144	.70011	-3.925	.000	high
	Female	30	4.0667	.64565			high
Total degree of Perception of aggression	Male	37	3.5595	.43236	-.200	.842	high
	Female	30	3.5830	.52726			high

*The differences are significant at the 0.05 level.

7.4.4 Differences in nurses' attitudes toward aggression by the ward of work variable for (ATAS):

In order to study differences in attitudes by the ward of work variable, One Way Analysis Of Variance (ANOVA) test was used, and the results are as the following as noted from (Table 24). It is noted that the differences by the ward of work are significant in attitudes toward the following scales: violent reaction scale (p=0.026), offensive (p=0.020), Communicative (p=0.005), and Intrusive (p=0.001), but the differences by the ward of work are not significant in attitudes toward the other scales.

Table 24. Differences in nurses' attitudes toward inpatient aggression by the ward of work variable.

Scale	F	Sig.
a) acceptable normal reaction	1.561	0.185
b) violent reaction scale	2.764	0.026*
c) functional reaction scale	1.134	0.352
d) offensive	2.920	0.020*
e) Communicative	3.756	0.005*
f) Destructive	1.906	0.106
g) Protective	1.744	0.138
h) Intrusive	4.711	0.001*
Total degree of Perception of aggression	2.149	0.072

*The differences are significant at the 0.05 level.

In order to study these differences by the ward of work in these scales, LSD multiple comparisons test was used (Table 25), and the results are the following: The differences toward the violent reaction scale are between the ward (rehabilitation male) in comparison with the other groups, implying that the group (rehabilitation male) have higher agreement than the other groups. The differences toward the offensive scale are between the ward of work group (rehabilitation male) in comparison with the other groups implying that the group (recovery male) have higher agreement than the other groups. The differences toward the Communicative scale are between the ward of work group (admission male) in comparison with the other groups implying that the group (admission male) have higher agreement than the other groups. The differences toward the Intrusive scale are between the ward of work group (rehabilitation male) in comparison with the other groups implying that the (rehabilitation male) have higher agreement than the other groups. Also, the differences toward the Intrusive scale are between the ward of work group (chronic female) in comparison with the group (admission female), implying that the group (chronic female) have higher agreement than only the group (admission female).

According to attitudes to acceptable normal reaction scale, the highest ward of work group is

(rehabilitation female) with a high level mean (3.7). According to attitudes to violent reaction scale, the highest ward of work group is (rehabilitation male) with a very high level mean (4.47). According to attitudes to functional reaction scale, the highest ward of work group is (rehabilitation female) with a high level mean (3.91).

According to attitudes to offensive scale, the highest ward of work group is (rehabilitation male) with a very high level mean (4.54). According to attitudes to Communicative scale, the highest ward of work group is (admission male) with a medium level mean (3.39). According to attitudes to Destructive scale, the highest ward of work group is (rehabilitation male) with a very high level mean (4.61). According to attitudes to Protective scale, the highest ward of work group is (admission male) with a high level mean (3.71). According to attitudes to Intrusive scale, the highest ward of work group is (rehabilitation male) with a very high level mean (4.42). According to attitudes to total degree of perception of aggression scale, the highest ward of work group is (rehabilitation female) with a high level mean (3.84).

Table 25. LSD multiple comparisons test for differences by the ward of work.

Dependent Variable	(I) The ward of work	(J) The ward of work	Mean Difference (I-J)	Sig.
violent reaction scale	rehabilitation male	admission male	.73173(*)	.003
		admission female	.53581(*)	.042
		rehabilitation female	.33838	.219
		chronic male	.83333(*)	.003
		chronic female	.62121(*)	.026
Offensive	rehabilitation male	admission male	.86345(*)	.002
		admission female	.49675	.091
		rehabilitation female	.29762	.334
		chronic male	.86905(*)	.006
		chronic female	.69444(*)	.027
Communicative	admission male	admission female	1.21034(*)	.001
		rehabilitation female	.57734	.134
		rehabilitation male	1.14216(*)	.002
		chronic male	1.16993(*)	.003
		chronic female	.94771(*)	.015
Intrusive	rehabilitation male	admission male	1.00490(*)	.000
		admission female	1.17424(*)	.000
		rehabilitation female	.78704(*)	.009
		chronic male	.60185(*)	.043
		chronic female	.56481	.057
		admission female	.60943(*)	.044
		rehabilitation female	.22222	.478
		rehabilitation male	-.56481	.057
		chronic male	.03704	.906

7.4.5 Differences in nurses' attitudes toward aggression by scientific degree variable for (ATAS):

In order to study differences in attitudes by the scientific degree variable, One Way Analysis Of Variance (ANOVA) test was used, and the results are as the following (table 26), there are no significant differences in attitudes toward all scales items by the scientific degree.

Table 26. Differences in nurses' attitudes toward inpatient aggression by the scientific degree variable.

Scale	F	Sig.
a) acceptable normal reaction	0.471	0.627
b) violent reaction scale	0.801	0.453
c) functional reaction scale	2.692	0.075
d) offensive	1.442	0.244
e) Communicative	1.190	0.311
f) Destructive	0.583	0.561
g) Protective	1.785	0.176
h) Intrusive	0.743	0.480
Total degree of Perception of aggression	1.393	0.256

*The differences are significant at the 0.05 level.

For the attitudes to acceptable normal reaction, violent reaction, functional reaction, offensive, communicative, and destructive, the highest scientific grade group is master of mental health (Table 27).For the attitudes to Protective and intrusive scale, the highest scientific grade group is staff with a high level mean (3.60) and (3.87) respectively (Table 28).

Table 27. Number, mean, standard deviation and mean level of attitude toward aggression by the scientific degree.

Scale	Scientific grade	N	Mean	Std. Deviation	Mean level
acceptable normal reaction	Diploma	45	3.0519	.86407	medium
	Bachelorette	19	3.1974	.87762	medium
	master of mental health	3	3.4722	.34694	high
	Total	67	3.1119	.84966	medium
violent reaction scale	Diploma	45	3.8970	.67018	high
	bachelorette	19	4.0335	.64369	high
	master of mental health	3	4.3333	.57735	very high
	Total	67	3.9552	.65810	high
functional reaction scale	diploma	45	3.5630	.59701	high
	bachelorette	19	3.2982	.85089	medium
	master of mental health	3	4.2222	.69389	very high
	Total	67	3.5174	.69820	high
Offensive	diploma	45	4.0000	.71038	high
	bachelorette	19	3.8496	.80457	high
	master of mental health	3	4.6190	.65983	very high
	Total	67	3.9851	.74153	high
Communicative	diploma	45	2.5185	.95228	low
	bachelorette	19	2.7719	1.12246	medium
	master of mental health	3	3.3333	1.15470	medium
	Total	67	2.6269	1.01258	medium
Destructive	diploma	45	4.1778	.68387	high
	bachelorette	19	3.9825	.69809	high
	master of mental health	3	4.2222	.38490	very high
	Total	67	4.1244	.67628	high
Protective	diploma	45	3.1333	.92564	medium
	bachelorette	19	3.6053	.90644	high
	master of mental health	3	3.5000	1.32288	high
	Total	67	3.2836	.94638	medium
Intrusive	diploma	45	3.6296	.79208	high
	bachelorette	19	3.8772	.66861	high
	master of mental health	3	3.7778	.38490	high
	Total	67	3.7065	.74653	high
Total degree of Perception of aggression	diploma	45	3.5343	.40296	High
	bachelorette	19	3.5868	.60668	High
	master of mental health	3	4.0000	.45484	High
	Total	67	3.5700	.47356	High

7.4.6 Differences in nursing attitudes toward aggression by the Job Satisfaction variable for (ATAS)

In order to study differences in attitudes by the job satisfaction , One Way Analysis Of Variance (ANOVA)-test was used and the results from the table (28), it is noted that the differences by the job satisfaction are not significant in the ATAS, for full description of job satisfaction.

Table 28. Differences in nurses' attitudes toward inpatient aggression by the job satisfaction.

(ATAS) Scale	F	Sig.
a) acceptable normal reaction	0.442	0.723
b) violent reaction scale	0.781	0.509
c) functional reaction scale	0.912	0.440
d) offensive	1.451	0.236
e) Communicative	0.439	0.726
f) Destructive	1.124	0.346
g) Protective	1.065	0.371
h) Intrusive	0.849	0.472
Total degree of Perception of aggression	0.732	0.537

*The differences are significant at the 0.05 level.

7.4.7 Differences in attitudes by work shift variable:

In order to study differences in attitudes by work shifts, independent samples T-test was used. From the table (29), it is noted that there are no significant differences in attitudes toward all scales by the work shift.

Table 29. Differences in nursing attitudes toward aggression by the work shift variable.

Scale	work shift	N	Mean	St.dev	T	Sig.	Mean level
a) acceptable normal reaction	Morning	9	3.046	0.724	-0.247	0.805	medium
	All shifts	58	3.122	0.873			medium
b) violent reaction scale	Morning	9	3.859	0.774	-0.471	0.639	high
	All shifts	58	3.970	0.645			high
c) functional reaction scale	Morning	9	3.481	0.536	-0.165	0.870	high
	All shifts	58	3.523	0.724			high
d) offensive	Morning	9	4.206	0.506	0.962	0.340	very high
	All shifts	58	3.951	0.769			high
e) Communicative	Morning	9	2.593	0.760	-0.108	0.914	low
	All shifts	58	2.632	1.052			medium
f) Destructive	Morning	9	4.333	0.645	0.996	0.323	very high
	All shifts	58	4.092	0.681			high
g) Protective	Morning	9	2.889	0.741	-1.353	0.181	medium
	All shifts	58	3.345	0.965			medium
h) Intrusive	Morning	9	3.741	0.662	0.147	0.884	high
	All shifts	58	3.701	0.764			high
Total degree of Perception of aggression	Morning	9	3.556	0.499	-0.098	0.922	high
	All shifts	58	3.572	0.474			high

*The differences are significant at the 0.05 level

7.5 Differences in nurses' practices of management of inpatient aggression by the nurse's characteristics.

7.5.1 Differences in nurses' practice of aggression management by the age for (MAVAS) instruments:

In order to study differences in attitudes by the age variable, One Way Analysis Of Variance (ANOVA)-test was used and the results from the table (30), there are no significant differences of nurse's practice of aggression management by the age variable.

Table 30. Differences in nurses' practice of management of inpatient aggression by the age.

MAVAS Scale	F	Sig
i) Internal causative factors	0.139	0.870
j) External causative factors	0.759	0.472
k) Situational/interactional causative factors	0.311	0.734
Total degree of patient factors	0.301	0.741
l) Management: general	2.628	0.080
m) Management: use of medication	0.243	0.785
n) Management: use of seclusion	0.480	0.621
o) Management: restraint	1.195	0.309
p) Management: non-physical methods	1.169	0.317
Total degree of the nurses attitudes toward the aggression management	0.347	0.708

*The differences are significant at the 0.05 level.

7.5.2 Differences in nursing practice by the years of experience variable for MAVAS:

In order to study differences in practice by the years of experience variable, One Way Analysis Of Variance (ANOVA)-test was used and the results are from the table (31), it is noted that the differences by the years of experience are significant only in nurses' practices toward the Management in general (p=0.016).

Table 31. Differences in nurses' practices toward inpatient aggression by the years of experience.

MAVAS scale	F	Sig
i) Internal causative factors	.569	.637
j) External causative factors	1.115	.350
k) Situational/interactional causative factors	.070	.976
Total degree of patient factors	.032	.992
l) Management: general	3.694	.016*
m) Management: use of medication	.621	.604
n) Management: use of seclusion	2.001	.123
o) Management: restraint	.549	.651
p) Management: non-physical methods	.507	.679
Total degree of the nurses attitudes toward the aggression management	.632	.597

*The differences are significant at the 0.05 level.

In order to study these differences by the years of experience in Management in general, LSD multiple comparisons test was used, and the results are: from the table (32) , it is noted that the differences toward the Management in General are between the years of experience groups (1-3 years), (4-8 years) and (9-15 years) in comparison with the group (over 15 years), implying that the group (over 15 years) have higher agreement than the other years of experience groups.

Table 32. LSD multiple comparisons Test for differences by the years of experience in management in general.

(I) Years of experience	(J) years of experience	Mean Differences(I-J)	Sig.
Over 15 Years	1_3 Years	.78030*	.017
	7_8 Years	.65311*	.022
	9-15 Years	.86364*	.006

*The differences are significant at the 0.05 level.

According to attitudes to External causative factors scale and Situational/interactional causative factors, all nurses, regardless of their years of experience, consider attitudes towards aggression as based highly on external and interactional causative factors. According to attitudes to Management: general scale, most of the nurses in the years of experience group in medium level except age group of (over 15 years) with high level. According to attitudes to Management: use of medication scale, seclusion, non physical methods and restraint, medication, restraint, non physical methods and seclusion are recommended by all nurses regardless years of experience.

7.5.3 Differences in nursing practice by sex variable for (ATAS):

In order to study differences in practice by sex variable, independent samples T-test was used and the results are as the following: From the table (33), it is noted that the differences by sex are significant in Management in general (p=0.004) and management: non-physical methods (p=0.029).

The attitudes toward the Management in general for males (mean=3.65) are higher than that for females (3.00). The attitudes toward the Management: non-physical methods for males (mean=3.60) are higher than that for females (3.37). The attitudes toward the Total degree of the nurses attitudes toward the aggression management for males (mean=3.59) are higher than that for females (3.41).

Table 33. Differences in nurses' practice toward inpatient aggression by the sex.

MAVA Scale	Sex	N	Mean	St.dev	T	Sig	Mean level
i) Internal causative factors	Male	37	3.4216	.45162	1.405	.165	high
	Female	30	3.2333	.64345			medium
j) External causative factors	Male	37	3.8468	.66941	-1.905	.061	high
	Female	30	4.1444	.59166			high
k)Situational/interactional causative factors	Male	37	3.8865	.62812	-.182	.856	high
	Female	30	3.9133	.56735			high
Total degree of patient factors	Male	37	3.6985	.44831	-.058	.954	high
	Female	30	3.7051	.47808			high
l) Management: general	Male	37	3.6486	.74410	2.968	.004	high
	Female	30	3.0000	1.04221			medium
m) Management: use of medication	Male	37	3.5315	.46121	-.949	.346	high
	Female	30	3.6333	.40448			high
n) Management: use of seclusion	Male	37	3.6847	.52084	.884	.380	high
	Female	30	3.5778	.45430			high
o) Management: restraint	Male	37	3.4189	.46418	.918	.362	high
	Female	30	3.3000	.59596			medium
p) Management: non-physical methods	Male	37	3.6014	.45818	2.233	.029	high
	Female	30	3.3667	.38693			medium
Total degree of the nurses attitudes toward the aggression management	Male	37	3.5849	.28958	2.461	.017	high
	Female	30	3.4071	.29963			high

*The differences are significant at the 0.05 level.

7.5.4 Differences in nursing practice by the ward of work for (MAVAS):

In order to study differences in practice by the ward of work variable, One Way Analysis Of Variance (ANOVA)-test was used, and the results are as the following as seen in the table (34), it is noted that the differences by the ward of work are significant for the following items: External causative factors(p=0.005), Situational/interactional causative factors (p=0.011), and Management in general (p=0.002), but the differences by the ward of work are not significant in attitudes toward the other remaining scales.

Table 34. Differences in nurses' practice toward inpatient aggression by the ward of work.

MAVA Scale	F	Sig
i) Internal causative factors	1.999	0.091
j) External causative factors	3.763	0.005*
k) Situational/interactional causative factors	3.300	0.011*
Total degree of patient factors	3.264	0.011*
l) Management: general	4.376	0.002*
m) Management: use of medication	0.796	0.557
n) Management: use of seclusion	1.947	0.099
o) Management: restraint	1.925	0.103
p) Management: non-physical methods	1.148	0.345
Total degree of the nurses attitudes toward the aggression management	2.308	0.055

*The differences are significant at the 0.05 level.

In order to study these differences by the ward of work in these scales, LSD multiple comparisons test was used, and the results are as the following in (table35) of multiple comparisons it is noted that, the differences toward the External causative factors are between the ward (rehabilitation male) corresponding to the other groups, implying that the group (rehabilitation male) have higher agreement than the other groups (table 35). Differences toward the Situational/interactional causative factors are between the ward of work group (rehabilitation male) corresponding to the other groups, implying that the group (rehabilitation male) have higher agreement than the other groups. Also, the differences toward the Situational/interactional causative factors are between the ward of work group (rehabilitation female) corresponding to the groups (admission female) and (chronic female), implying that the group (rehabilitation female) have higher agreement than the other two groups only. The differences toward the total degree of patient factors are between the ward of work group (rehabilitation male) corresponding to the other groups implying that the group (rehabilitation male) have higher agreement than the other groups. Also, the differences toward the total degree of patient factors are between the ward of work group (rehabilitation female) corresponding to the groups (admission female), (chronic male) and (chronic female), implying that the group (rehabilitation female) have higher agreement than the other three

groups. Finally, the differences toward the Management in general are between all the ward of work groups corresponding to the group (rehabilitation male), implying that the group (rehabilitation male) has less agreement than the other groups (table 35).

Table 35. LSD multiple comparisons Test for differences by the ward of work.

MAVA scale	(I) The ward of work	(J) The ward of work	Mean Difference(I-J)	Sig
External causative factors	rehabilitation male	admission male	.70098(*)	.003
		admission female	.97727(*)	.000
		rehabilitation female	.50926	.055
		chronic male	.65741(*)	.014
		chronic female	.80556(*)	.003
Situational/interactional causative factors	rehabilitation female	admission male	.29281	.202
		admission female	.67677(*)	.008
		rehabilitation male	-.04444	.856
		chronic male	.44444	.092
		chronic female	.64444(*)	.016
	rehabilitation male	admission male	.33725	.110
		admission female	.72121(*)	.003
		rehabilitation female	.04444	.856
		chronic male	.48889(*)	.049
		chronic female	.68889(*)	.006
Total degree of patient factors	rehabilitation female	admission male	.32328	.069
		admission female	.39938(*)	.040
		rehabilitation male	-.05342	.776
		chronic male	.41026(*)	.044
		chronic female	.52991(*)	.010
	Rehabilitation male	admission male	.37670(*)	.022
		admission female	.45280(*)	.013
		rehabilitation female	.05342	.776
		chronic male	.46368(*)	.016
		chronic female	.58333(*)	.003
Management: general	Rehabilitation female	admission male	-1.33088(*)	.000
		admission female	-1.07955(*)	.003
		rehabilitation female	-1.40278(*)	.000
		chronic male	-1.01389(*)	.008
		chronic female	-1.06944(*)	.005

* The mean difference is significant at the .05 level.

According to attitudes to Internal causative factors, the highest ward of work group is (rehabilitation female) with a high level mean (3.64). According to attitudes to External causative factors, the highest ward of work group is (rehabilitation male) with a very high level mean (4.58). According to attitudes to Situational/interactional causative factors, the highest ward of work group is (rehabilitation male) with a very high level mean (4.27). According to attitudes to total degree of patient factors, the highest ward of work group is (rehabilitation male) with a high level mean (4.02). According to attitudes to Management: general, the highest ward of work group is (rehabilitation female) with a high level mean (3.78(. According to attitudes to Management: use of medication, the highest ward of work group is (chronic male) with a high level mean (3.78).

According to attitudes to Management: use of seclusion scale, the highest ward of work group is (admission female) with a high level mean (3.88). According to attitudes to Management: restraint, the highest ward of work group is (chronic male) with a high level mean (3.56). According to attitudes to Management: non-physical methods, the highest ward of work group is (rehabilitation female) with a high level mean (3.61) According to attitudes to total degree of the nurses' attitudes toward the aggression management, the highest ward of work group is (admission female) with a high level mean (3.61), (see Appendix 10).

7.5.5 Differences in nursing practice by Scientific degree for (MAVAS):

In order to study differences in attitudes by the scientific grade variable, One Way Analysis Of Variance (ANOVA)-test was used, and the results are as the following in (table 36), it is noted that there are no significant differences in attitudes toward all scales by the scientific degree.

Table 36.Differences in nurses' practice toward inpatient aggression by the scientific degree.

MAVA Scale	F	Sign
i) Internal causative factors	1.261	0.290
j) External causative factors	1.978	0.147
k) Situational/interactional causative factors	0.431	0.652
Total degree of patient factors	0.644	0.529
l) Management: general	0.036	0.965
m) Management: use of medication	0.328	0.722
n) Management: use of seclusion	2.186	0.121
o) Management: restraint	0.321	0.727
p) Management: non-physical methods	0.244	0.784
Total degree of the nurses attitudes toward the aggression management	0.382	0.684

*The differences are significant at the 0.05 level.

As noted from the table (37) the master of mental health degree has a high agreement that external causative factors and interactional causative factors have an effect on patient's aggression. Also, they believe in management in general and medications more than the other scientific levels. According to nurses' practices to management: use of medications, restraint and non physical methods, the highest scientific degree group is staff with a high level mean (3.61). According to attitudes to the Internal causative factors scale, the highest scientific grade group is practical with a high level mean (3.41).

Table 37. Number, mean, standard deviation and mean level to describe nurses' practices toward aggression by the scientific grade level.

MAVA scale	Scientific grade	N	Mean	Std. Deviation	Mean level
Internal causative factors	Diploma	45	3.4089	.46506	high
	Bachelorette	19	3.2105	.71639	medium
	master of mental health	3	3.0667	.46188	medium
	Total	67	3.3373	.54961	medium
External causative factors	Diploma	45	3.9778	.62925	high
	Bachelorette	19	3.8772	.66861	high
	master of mental health	3	4.6667	.57735	very high
	Total	67	3.9801	.64844	high
Situational/interactional causative factors	Diploma	45	3.8978	.57307	high
	Bachelorette	19	3.8526	.65606	high
	master of mental health	3	4.2000	.72111	very high
	Total	67	3.8985	.59734	high
Total degree of patient factors	Diploma	45	3.7282	.41735	high
	Bachelorette	19	3.6113	.56786	high
	master of mental health	3	3.8718	.24727	high
	Total	67	3.7015	.45833	high
Management: general	Diploma	45	3.3556	.97481	medium
	Bachelorette	19	3.3421	.94358	medium
	master of mental health	3	3.5000	.50000	high
	Total	67	3.3582	.94069	medium
Management: use of medication	Diploma	45	3.5704	.45849	high
	Bachelorette	19	3.5614	.38574	high
	master of mental health	3	3.7778	.50918	high
	Total	67	3.5771	.43648	high
Management: use of seclusion	Diploma	45	3.6000	.41803	high
	Bachelorette	19	3.7895	.61071	high
	master of mental health	3	3.2222	.50918	medium
	Total	67	3.6368	.49145	high
Management: restraint	Diploma	45	3.3556	.53959	medium
	Bachelorette	19	3.4211	.53394	high
	master of mental health	3	3.1667	.28868	medium
	Total	67	3.3657	.52644	medium
Management: non-physical methods	Diploma	45	3.4944	.33915	high
	Bachelorette	19	3.5263	.65029	high
	master of mental health	3	3.3333	.14434	medium
	Total	67	3.4963	.44058	high
Total degree of the nurses attitudes toward the aggression management	Diploma	45	3.4937	.23681	high
	Bachelorette	19	3.5489	.44674	high
	master of mental health	3	3.4048	.08248	high
	Total	67	3.5053	.30516	high

7.5.6 Differences in nursing practice by the Job Satisfaction variable for (MAVAS):

In order to study differences in attitudes by the job satisfaction variable, One Way Analysis Of Variance (ANOVA) test was used, and the results are as the following in (table 38), it is noted that the differences by the Job Satisfaction are significant only for attitudes toward the Management in general (p=0.001), but the differences by the Job Satisfaction are not significant in attitudes toward the other scales.

Table 38. Differences in nurses' practices toward inpatient aggression by the job satisfaction.

MAVAS Scale	F	sig
i) Internal causative factors	0.200	0.896
j) External causative factors	1.579	0.203
k) Situational/interactional causative factors	1.441	0.239
Total degree of patient factors	1.059	0.373
l) Management: general	6.382	0.001*
m) Management: use of medication	1.336	0.271
n) Management: use of seclusion	1.055	0.375
o) Management: restraint	0.780	0.510
p) Management: non-physical methods	0.609	0.611
Total degree of the nurses attitudes toward the aggression management	1.236	0.304

*The differences are significant at the 0.05 level.

In order to study these differences by the Job Satisfaction in Management in general, LSD multiple comparisons test was used, and the results are as the following in (table 39), of multiple comparisons, it is noted that the differences toward the Management in general scale are between all Job Satisfaction groups in comparison with the job satisfaction group (not satisfied) implying that the job satisfaction group (not satisfied) have less agreement than the other Job Satisfaction groups.

Table 39. LSD multiple comparisons Test for the differences by the job satisfaction in management in general.

(I) Job Satisfaction	(J) Job Satisfaction	Mean Difference (I-J)	Sig.
Not satisfied	Satisfied	-1.15152(*)	.000
	Doesn't like to work in this hospital	-.93333(*)	.032
	Neutral	-.74242(*)	.007

*The differences are significant at the 0.05 level.

For the attitudes to Internal causative factors scale, the highest Job satisfaction group is (Not satisfied) with a medium level mean (3.38). For the attitudes to the External causative factors scale, the highest Job Satisfaction group is (Not satisfied) with a very high level mean (4.22). For the attitudes to the Situational/interactional causative factors scale, the highest Job Satisfaction group is (Not satisfied) with a high level mean (4.06). For the attitudes to total degree of patient factors scale, the highest Job satisfaction group is (Not satisfied) with a high level mean (3.83). For the attitudes to Management: general scale, the highest Job satisfaction group is (Satisfied) with a high level mean (3.82). For the attitudes to Management: use of medication scale, the highest Job satisfaction group is (Don't like to work in this hospital) with a high level mean (3.93). For the attitude to management: use of seclusion scale, the highest job satisfaction group is (Don't like to work in this hospital) with a high level mean (3.87). For the attitudes to Management: restraint scale, the highest Job satisfaction group is (Not satisfied) with a high level mean (3.5), and the attitudes to Management: non-physical methods scale, the highest Job satisfaction group is (Neutral) with a high level mean (3.58). For the attitudes to Total degree of the nurses attitudes toward the aggression management scale, the highest Job satisfaction group is (Don't like to work in this hospital) with a high level mean (3.66).

7.5.7 Differences in nursing practice by the work shift variable:

In order to study differences in attitudes by the work shift, independent samples T-test was used, and the results are as the following*:* From the table (40), it is noted that there are no significant differences in attitudes toward all scales by the work shift variable.

Table 40. Differences in nurses' practices toward inpatient aggression by the work shift.

MAVAS	Work shift	N	Mean	St.dev	T	Sig	Mean level
i) Internal causative factors	Morning	9	3.511	0.501	1.020	0.312	high
	All shifts	58	3.310	0.556			medium
j) External causative factors	Morning	9	4.074	0.813	0.465	0.644	high
	All shifts	58	3.966	0.627			high
k)Situational/interactional causative factors	Morning	9	4.000	0.436	0.545	0.588	high
	All shifts	58	3.883	0.620			high
Total degree of patient factors	Morning	9	3.829	0.368	0.896	0.374	high
	All shifts	58	3.682	0.470			high
l) Management: general	Morning	9	3.889	0.782	1.852	0.069	high
	All shifts	58	3.276	0.942			medium
m) Management: use of medication	Morning	9	3.519	0.294	-0.430	0.668	high
	All shifts	58	3.586	0.456			high
n) Management: use of seclusion	Morning	9	3.593	0.364	-0.288	0.774	high
	All shifts	58	3.644	0.511			high
o) Management: restraint	Morning	9	3.278	0.507	-0.535	0.594	medium
	All shifts	58	3.379	0.532			medium
p) Management: non-physical methods	Morning	9	3.417	0.280	-0.580	0.564	high
	All shifts	58	3.509	0.461			high
Total degree of the nurses attitudes toward the aggression management	Morning	9	3.524	0.220	0.194	0.847	high
	All shifts	58	3.502	0.318			high

*The differences are significant at the 0.05 level.

8. Discussion

This study found that nurses in Palestine perceived aggression as destructive, offensive, a violent reaction, intrusive and a functional reaction more than protective, acceptable normal reaction or as a communicative. This result is consistent with the studies by Jame et al. (2011) and Jonker and his colleagues (2008) in the Netherlands and in contrast with a study by Jansen et al. (2006) that showed aggression essentially communicative and protective.

Longer work experience was significantly associated with higher frequency of management of aggression in general, it is noted that the differences toward the Management in General are between the years of experience groups (1-3 years), (4-8 years) and (9-15 years) in comparison with the group (over 15 years), implying that the group (over 15 years) have higher agreement than the other years of experience groups which is in contrast with the study of James et al. (2011) where it was shown that longer work experience was significantly accompanied with a higher frequency of physical violence as well as episodes of aggressive splitting behavior. Whittington (2002) found that people with more than 15 years experience were significantly more tolerant of aggression than those with fewer years of experience. This result is in congruence in our results.

Nurses from admissions wards (male and female) agree less with the protective and communicative attitudes scales than nurses from other types of wards. On the other hand, nurses from the admissions department (especially women) and rehabilitation departments (male and female) had higher violent reactions and offensiveness than other types of wards and nurses from the chronic female department had a higher intrusive scale than other types of departments. Our results are congruent by a study by Katz and Kirkland (1990) which showed that admission departments more than the other departments are often the site of violence. This may be due to serious psychopathology and mental disorders of patients in the admissions department (Duxbury, 2005, et al. Steiner 2000).

There is wide agreement in the literature that ward culture (Katz and Kirkland, 1990), and wards with less "stable" patients (e.g admission and locked departments) are often the sites of violence (Fottrell, 1980; Hodgkinson et al, 1985 ; Nijman et al, 1997; Katz and Kirkland, 1990). Several studies reported that patients admitted involuntarily under mental health legislation proved significantly more likely to be engaged in acts of violence (James et al, 1990; Powell et al, 1994).

In some studies, the conclusion is that the attacks often occurred when nurses administer drugs or leads or keep agitated patients (Soloff, 1983). According to sex, the findings indicate that female nurses more than their male colleagues, perceived aggression as an intrusive, offensive and violent reaction phenomenon. This

result can be explained by the notion that, in general, female nurses feel more intimidated by the verbal and physical expressions of aggression than male nurses. In our opinion, the male nurses more than the female nurses experienced aggression as an attempt to communicate, which is related to our findings. It seems likely that men, more than women, had the option of perceiving the relational dimension of aggressive behavior because they felt less intimidated and afraid. From experimental cognitive psychology, when one experiences anxiety, memory, attention, and reasoning are affected. A person is overwhelmed by emotions and unable to attend to external events, and he or she is concentrated on his or her own feelings of distress (Eysenck, et al , 1987).

Male nurses are more likely to be involved or called upon by their female counterparts to mediate in calming aggressive patients with the result that they are more exposed to violent acts. Though aggressive acts are likely to occur more frequently in closed wards, where a majority of patients are admitted involuntarily, the frequency of different types of aggression reported was higher in studies (Jonker et al. 2008; Oud et al. 2001; Nijman et al. 2005). Perhaps as declared in the paper by Jonker et al. (2008), aggressive acts now occur commonly such that about 40% of nursing staff, in their study had become insensitive to the frequency of their occurrence and now see them as routine.

Several staff factors related to the occurrence of aggression on psychiatric wards are reported in the literature. Among them is gender. The conclusions about gender and its associated higher risk of assault are inconclusive. In a study by Carmel and Hunter (1989), male nursing staffs were almost twice as likely as female staffs to be injured and nearly three times as likely to receive containment-related injuries. In contrast, in two other studies no differences were found between male and female nurses and their assault rate (Whittington, 1994; Cunningham et al., 2003).

The impact of education was considered in our study. The highest scientific certificate group is Master of mental health with a high level mean of attitudes to acceptable normal reaction scale, violent reaction scale, functional reaction scale, offensive scale, communicative scale, destructive scale, total degree of perception of aggression scale, external causative factors scale, situational/interactional causative factors scale, management: general scale, management: use of medication scale. Our study is in agreement with Jansen et al. (2006) in which it was shown that a low level of qualification was found to be associated with higher rates of assault (Whittington and Wykes, 1994; Cunningham et al., 2003). In several studies it was found that the more inexperienced the staff were, the more they were exposed to assaults (Hodgkinson et al., 1985; Whittington et al., 1996; Cunningham et al., 2003). Cunningham et al. (2003) found that an increased number of hours of contact between nurses and patients resulted in more injuries being sustained. Executive staffs were most likely to be injured by patient violence (Carmel and Hunter, 1989) and charge nurses and staff nurses were assaulted more frequently than those in the non-assaulted control group (Whittington, 1994). Most of the studies on the effects of staff education and training found that training staff about how to react to threatening situations can lead to a decline in the frequency or severity of aggressive incidents (Infantino and Musingo, 1985; Paterson et al., 1992; Phillips and Rudestam, 1995; Whittington and Wykes, 1996; Rixtel, 1997).

Studies on the time of day and an increase of aggression showed that most incidents take place in the daytime, then in the evening, with the lowest rate found during the night. Some studies reported that most assaults occurred during mealtimes and early in the afternoon (Carmel and Hunter, 1989; Lanza et al., 1994; Nijman et al., 1995; Vanderslott, 1998; Bradley et al., 2001). Others found an increased rate in the morning (Fottrell, 1980; Hodgkinson et al., 1985; Cooper and Mendonca, 1991). According to our study we found that morning shift nurses consider aggression as a violent and destructive reaction and they always use medications, restraint and seclusion to control the patients.

9. Conclusion

This study demonstrated that there are different attitudes of nurses toward patient aggression in psychiatric inpatient settings. What is important is to gain a better understanding of the factors that account for the differences in attitudes. Another possibly effective way of addressing the issue would be to concentrate on the process of attitude formation within the work setting. Social learning is a powerful source of the socialization process through which nurses learn about which behavior and is not appropriate in their professional culture.

This study found that aggression is negatively viewed by Palestinian mental health nurses. These attitudes are reflective of the opinions of lay persons in our society. There is a need for training programs to reorient the opinions of nurses in relation to inpatient aggression. These programs should contribute towards improved patient care and reduction in the frequency of aggressive acts within inpatient units. To enable research in this direction, we first have to consider what important patient, client, and environmental effects there are on the social learning of nurses who deal with aggression.

10. Nursing Implication

This study shows that mental health nurses differ in the way they evaluate aggressive behavior of psychiatric patients. This result is in contrast to the negative significance of the phenomenon of aggression primarily found

in the literature.

Staff education and training found that training staff about how to react to threatening situations can lead to a decline in the frequency or severity of aggressive incidents .Educational programs to make and keep nurses aware of and sensitive to the positive attitudes to aggressive client behavior is recommended.

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