

CASE REPORT

Applying the general aggression model in a Taiwanese psychiatric unit: A case study

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ABSTRACT

Workplace violence, particularly in psychiatric settings, affects nurses' physical and psychological health. Conducting aggression management before violent behaviour occurs is an evidence-based strategy that can reduce the impact of this type of behaviour. This article applies the General Aggression Model (GAM) to an individual with alcohol use disorder and the potential for violent behaviour. The GAM addresses the causes and processes of aggression from distal to proximate factors. The nurse used a comprehensive assessment of risk, intervened using key features of the GAM, and succeeded in avoiding a violent incident in the psychiatric unit. This case study suggests that further research is needed to standardize aggression management in different settings.

Key Words: General Aggression Model, Aggression, Case study, Nursing, Aggression management, Alcohol use disorder

1. INTRODUCTION

A psychiatric department is a unique setting in which patients' mental illnesses can be treated. However, it can also be harmful to the physical and psychological health of nurses because of the high frequency of workplace violence.^[1] A review article showed that 2.1% of nurses in the United States are injured as a result of workplace violence annually, costing US\$94,156 in treatment (US\$78,924) and indemnities (US\$15,232).^[2] Numerous studies have investigated psychiatric patient violence, and more than half of the 27 available studies were conducted in locked psychiatric settings, as reported by a systematic review article regarding institutional violence.^[3] Bader *et al.*^[4] found that patients with different types of psychiatric diagnoses (*e.g.*, schizophrenia or schizoaffective disorder, antisocial personality disorder, borderline personality disorder) at a forensic hospital near Los Angeles, California, reported that 52.7% of violent incidents

occurred in acute units, while 47.3% occurred in long-term units. A cross-sectional study in one of mainland China's psychiatric hospitals found that 82.4% of nurses had suffered from at least one type of violence in the previous six months.^[5]

A study in Taiwan showed that more than 60% of nurses, nursing aides, and clerks had violent experiences in a psychiatric hospital.^[6] Shiao *et al.*^[7] performed a cross-sectional study of assaults against nurses in Taiwan and reported that a higher number of annual incidences (*e.g.*, physical contact from sexual harassment, verbal harassment with sexual content, physical violence without sexual harassment, and verbal abuse) occurred in psychiatric hospitals than in general hospitals. In addition, the perceived threat of potential attacks during more than 20% of working hours varied significantly between nurses in psychiatric hospitals (35.3%) and those in general hospitals (15.5%). Chen *et al.*^[8] inferred that nurses

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are at the highest risk of becoming targets of aggression because they use isolation rooms, physical restraints, and drugs as aggression management strategies.

However, stopping violent incidents before they occur is possible through the proactive management of aggression in patients. The General Aggression Model (GAM), a comprehensive framework, can help nurses to assess the risk factors of aggression in patients and to consider adequate options for managing aggressive behaviour. This may further minimize violent incidents. Therefore, the purpose of this case study was to show a case involving a patient with alcohol use disorder, the key features of the GAM, and how nurses have used the GAM in clinical situations to mitigate aggressive acts and violence.

2. LITERATURE REVIEW

2.1 Definition of aggression

The New Oxford American Dictionary^[9] defines aggression as someone's behaviour and attitude showing hostility or violence towards another person. In its numerous forms, human aggression is defined as an aggressor's behaviour that intentionally harms another person (*e.g.*, the victim) or an object.^[10]

2.2 Theory of aggression

Multiple disciplines study the motives and causes of aggression, including psychology, sociology, biology, criminology, behavioural genetics, and evolution.^[11] Historically, aggression has been regarded as a part of human nature^[11] that is necessary for resource competition, self-protection, and reproduction.^[12] The nature of human aggression also relates to various perspectives, including the phylogenetic origin of aggression, which involves brain mechanisms related to anger and inhibition, and the origin of aggression from a social learning perspective, as well as motivational mechanisms that affect aggression.^[12] Several studies have explored Feshbach's^[13] aggression theory, which distinguishes between hostile aggression and instrumental aggression. An individual's desire can cause hostile aggression, which can lead to harmful results. Hostile aggression can also be called affective, impulsive, or reactive aggression^[13] because it is driven by anger, and the perpetrator is impulsive and thoughtless in his or her actions.^[14] Instrumental aggression demonstrates the perpetrator's desire for a specific outcome, such as attracting attention or self-preservation.^[13] Therefore, the perpetrator engages in aggressive acts to obtain or destroy something that the victim has.^[13,15] Fonberg^[16] proposed two categories of aggression: emotional aggression (primary and secondary aggression) and instrumental aggression. Anger and rage are associated with primary aggression, while defensive, sex-

ual, or alimentary motivational systems are correlated with secondary aggression.^[15]

Many theories focus on different viewpoints regarding aggression, such as biology,^[17] social learning theory,^[18] and frustration-aggression theory.^[19] Some people believe that aggression is influenced by human origins and involves genetic and endocrine factors; in particular, dopamine and serotonin levels are associated with aggressive acts.^[17] Social learning theory has postulated that individuals imitate aggressive behaviours via observing and listening, and the sources of aggressive behaviours include important family members, environmental circumstances, and situations presented by the media.^[18] Frustration-aggression theory was proposed by Dollard *et al.*,^[19] who suggested that aggressive acts are a natural response that results when an individual's goal is blocked by external factors. These theories involve various concepts and only explain the partial causes and the processes of aggression.

However, the GAM integrates the various advantages of the different aggression theories into a single framework that does not focus solely on one perspective of human nature, such as biology, psychological mechanisms, or genetics. Robertson *et al.*^[10] described the GAM as a comprehensive framework that integrates various specific theories, including cognitive neoassociation theory, social learning theory, script theory, excitation transfer theory, social interaction theory, and frustration-aggression theory.^[14,20] Anderson *et al.*^[21] initially tested the GAM using laboratory-based aggression experiments. Those researchers also proposed that the GAM can apply to a wide range of people and can explain the reasons for aggression and the causes of violent behaviour.^[20]

The first GAM (basic GAM) was concerned with the present internal state of an individual that leads to aggressive behaviour, but it lacked consideration of biological variables, such as genes and hormones, and environmental modifiers. The current GAM (advanced GAM) has been extended to encompass various risk factors for aggression that result from biological and environmental modifiers.^[22,23] The basic GAM refers to proximate episodic factors that are influenced by distal developmental factors, such as biological and environmental modifiers. Family and parenting problems, deprivation, difficult life conditions, and relationships with antisocial peers are environmental modifiers, while low arousal and serotonin levels, imbalances in hormone levels, and an insufficiency in executive functioning are categorized as biological modifiers.^[22] Biological and environmental interactions shape an individual's aggressive personality, which influences the person and situation variables.^[14]

The proximate episodic factors comprise three stages within a single episodic cycle of aggression: person and situation inputs, present internal state, and outcomes. Person inputs include personal traits, gender, beliefs, attitudes, values, long-term goals, and scripts.^[14] Situation inputs comprise aggression cues, such as violent media that prompt aggressive acts; social stress; bad moods; provocation; frustration; alcohol and drugs (*e.g.*, caffeine); incentives (desired objects); and uncomfortable environments, such as noise, heat, unpleasant odours, and threatening or fearful stimuli.^[14,20] The present internal state includes affect (mood and emotion); cognition (hostile thoughts, scripts); and arousal (mislabelling irrelevant events as sources of anger or being provoked to act aggressively), which influence one another. This internal state is influenced by both person and situation variables that can set the stage for negative effects, hostile cognition, and arousal processes. This guides the next stage, which is immediate appraisal of an outcome.^[14]

Whether people exhibit aggressive action depends on the complex appraisal and decision processes that are shown at the outcome stage. Although people may automatically demonstrate immediate appraisal without being aware of it, aggressive behaviour may not occur because people can overcome threat appraisal, such as fear, which is an aggression goal, with use of sufficient resources (*e.g.*, time and cognitive capacity). If resources are insufficient or the appraisal outcomes are unimportant or unsatisfactory, the impulsive action may be either aggressive or nonaggressive. The reappraisal circles may repeat numerous times until thoughtful action is instituted.^[22] When an individual makes a decision, either thoughtful or impulsive, the final action returns to the person and situation inputs through social encounters, guiding the next episodic cycle.^[14,22]

3. THE CASE

Mrs. Shu (pseudonym), a nurse, worked in the psychiatric unit of a local general hospital. In that facility, nurses managed various problems involving patients in both the intensive care unit (ICU) and an open unit as well as new patients transferred from the emergency room or outpatient department. The ICU accepted patients with various psychiatric disorders (*e.g.*, schizophrenia, bipolar disorder, substance use disorders, depressive disorders, personality disorders, and dementia). Generally, it provided intensive care to patients and monitored their vital signs, nutrition, and acute psychiatric symptoms, prescribed medications, and managed violent acts with physical restraint or seclusion in the ICU. There were no separate rooms, and the unit lacked sufficient space for the patients. A small corridor allowed one or two persons to pass through, and the beds were placed very close together.

The ward was completely filled with staff, patients, and security staff. It was noisy due to patients howling, yelling, and complaining as well as noise from the air conditioner and hot due to sometimes air-conditioner failures. Because all staff (nurses, physicians, security personnel, and housekeepers) had to rush to finish their work, the staff occasionally displayed actions of authority and power to manage the patients. However, this was not useful, particularly for several of the patients with alcohol use disorders, personality disorders, and bipolar disorders.

This case involved a 45-year-old male, Mr. Li (pseudonym), who had been diagnosed with alcohol use disorder. Mr. Li had been admitted to the ICU 4 days prior with stable vital signs except for a pulse rate of approximately 100-110 beats/minute. Mrs. Shu and Mr. Li were familiar with each other as he had received repeated admissions to the ward in the previous 4 years. Mr. Li was often suspicious of others and typically complained that the nurses and security staff had negative attitudes. Mr. Li was estranged from his family (his mother was the only person who cared for him, and his siblings were afraid to contact him). He could not find a job, threatened had his family to get money, and suffered from financial problems. The reason for this admission was to help Mr. Li stop consuming alcohol.

On this day, Mrs. Shu was on duty from 3 pm to 11 pm. When she reviewed the number of patients and the atmosphere in the ICU, she felt that the atmosphere was peculiar. Mr. Li appeared to be discussing something secretly. Some of the patients present in the ICU had been diagnosed with personality disorders or substance use disorders. At 5 pm, many of the staff members finished work and left the hospital. However, Mrs. Shu found that the looks on the faces and in the eyes of patients indicated that the atmosphere of hostility was increasing rather than dissipating. Mrs. Shu decided to visit the patients again. She found a long glass light tube wrapped with a cloth in Mr. Li's bed. Mr. Li had taken it from the ceiling of the ICU. Mrs. Shu escorted Mr. Li to another room to question him about this weapon. Mrs. Shu felt that it was necessary to separate Mr. Li from his peer group immediately and investigate the cause of this situation more deeply. Mrs. Shu made this decision because she had a friendly nurse-patient relationship with Mr. Li.

After Mr. Li had been moved to the interview room, Mrs. Shu asked, "*Why did you remove the light tube? We have known each other for a long time. I really thought we had a good relationship and didn't expect you to do such a thing.*"

Mr. Li said, "*I was not going to harm you, but I really dislike the security staff. They have extremely bad attitudes. We were planning to attack one of them to let the security staff*

know that they should respect us. However, I was worried about being punished, so I was still considering this course of action. I am really dissatisfied with the staff attitudes and having to stay here.” (A young resident physician entered the room. The resident physician, who was not familiar with Mr. Li, had been working since 7 am and was extremely tired.)

The resident physician said, “*You should not have hidden the light tube. We can not allow you to hide a glass light tube in your bed. If you do not follow the rules, we will isolate you in a special room with physical restraints.*” (The resident physician’s speech seemed to spark anger in Mr. Li. The volume of his voice and the muscle tension in his face and limbs increased.)

Mr. Li said, “*I do not agree with you. I don’t have any problem. Why are you keeping me in this hospital? I would like to leave now. I always feel that the staff are looking down on me, do not respect me, and ignore patients’ complaints. Many people dislike it here. They have the same complaints as I do. It is not just me saying so.*” (Mrs. Shu felt that the patient would soon lose control. Mrs. Shu prepared to move me quickly to the side in case Mr. Li attempted to attack her. Mrs. Shu stood by Mr. Li’s right side and placed her hand on his shoulder to comfort him.)

Mrs. Shu said, “*Just relax, Mr. Li. We told you about the admission rules. We did not criticize you, and we were looking forward to helping you improve. I understand that you dislike your surroundings. If your physical conditions and your emotions become more stable, like they have in the past, your physician will let you move to an open ward where you will have more freedom. I hope things can improve soon and that you can be transferred out of here. If you attack the staff, your stay in the closed unit may be prolonged. Please think more about my suggestions.*” (Mr. Li became silent and his muscle tension decreased.)

Mrs. Shu said, “*You said, ‘Many people’... You mean, they are your friends and they are around you because you live here now. They have the same complaints that you do.*”

As the volume of his voice increased, Mr. Li said, “*Yes, we are dissatisfied about many things, including the food, the temperature is too high, it is crowded, there is no smoking, and especially the staff attitudes. They are overbearing and ask us to follow their orders. These things make me anxious, irritable, and angry. The security staff used to stare at me. Wang (pseudonym) told me that it was time to do something to fight the bad situation and win respect from the staff and that we should not be controlled by the staff. I think... he is right.*” (Mr. Wang was a young patient with antisocial per-

sonality disorder; he had problems in the military, which is why he was sent to this hospital. Mr. Wang used to provoke health providers’ behaviours and had an unfriendly attitude conveyed through his body language. Mrs. Shu guessed that Mr. Wang might have manipulated Mr. Li to prepare to attack the staff.) (Most of Mr. Li’s friends have substance use disorders or personality disorders. They usually gather and display hostile body language towards the staff or argue about the rules of the hospital, such as no smoking or not having enough sleeping pills.)

The resident physician said, “*I understand that you feel that... the staff are not concerned about your needs, but your actions might hurt staff and should not be carried out. You need to calm down. If you attack the staff, this means that you are not able to control your emotions well. To help you get better, you may need to stay in the hospital for more treatment.*”

After the resident physician left, Mrs. Shu talked more with Mr. Li. “*Why did your friends, who were in the same room, ask you to hide the light tube in your bed? A good friend would encourage you to take positive actions. I know that you did not intend to harm anyone, and I need your help to prevent violence from occurring and to reject the demands of your friends.*” (Mr. Li looked at Mrs. Shu and remained silent.)

Mrs. Shu said, “*In addition, one day you will leave our hospital. Why don’t you think about what you can do to quit drinking alcohol as soon as you possibly can?*”

Mr. Li said, “*I did, but I failed many times, so I am not sure.*” (Mrs. Shu knew this task was difficult for Mr. Li; it was a complex problem, and Mr. Li needed to exert additional effort to address it. It was not suitable timing to discuss the issue at length.)

Mrs. Shu said, “*I believe you know what the right decision is—to stop yourself from hurting someone. I will take you back to your room. If you have any problems, I would like to help you, so please let me know.*” After this, Mr. Li’s violent behaviour stopped.

4. ANALYSIS

The present case highlights the potential for physical violence and the warning signs that can be observed or assessed before physical violence begins, which in part can be elaborated by the GAM from distal developmental factors to proximate episodic factors. The following section shows the key risk variables of aggression with complex and dynamic psychological states.

4.1 Distal developmental factors

4.1.1 Environmental modifiers

In this case, when the patient was in the psychiatric ICU, he was deprived of freedom and lacked family support because his family, except for his mother, had no relationship with him. The patient had no job and suffered from financial problems caused by his alcohol use disorder. Furthermore, this patient's peer, who had a substance use disorder and an antisocial personality disorder, complained about the rules of the hospital frequently and convinced Mr. Li that he should act aggressively. A previous review article demonstrated that patients with antisocial personality disorder are skilled at assessing and manipulating another person's motives while lacking a moral dimension and empathy.^[24] These factors were responsible for the potential aggression.

4.1.2 Biological modifiers

During the alcohol withdrawal stage, the alcohol level in the patient's central nervous system, which is a pathophysiological aspect decreases. The postsynaptic gamma-aminobutyric acid (GABA) receptors and N-methyl-D-aspartate (NMDA) receptors are influenced by alcohol. Ideally, the effect of alcohol on GABA receptors causes the hyperpolarisation of cells as a result of sedation.^[25] The effect on NMDA receptors leads to an increased sensitivity for glutamate (an excitatory neurotransmitter) to bind to NMDA receptors, which causes neuronal excitement. However, when an individual is then deprived of alcohol, the GABA receptors are down-regulated, the NMDA receptors are up-regulated, and the dopaminergic system is dysregulated, leading to various symptoms and signs of alcohol withdrawal syndrome (AWS).^[26] This patient exhibited anxiety, irritability, uncooperative behaviour, and labile emotions (the patient showed stability and anxiety at various times, complaining that the staff treated him badly) as symptoms of AWS,^[27] in addition to palpitations (his pulse rate was approximately 100-110 beats/min).

4.2 Proximate episodic factors

4.2.1 Person

Roberson^[26] showed that alcohol withdrawal symptoms often occur in males, although such symptoms are rarely reported in people under 20 years of age. The patient in this case study, who was male and above 20 years of age, fit this profile, and therefore, this patient can be predicted to experience AWS (labile emotions), which is related to aggression. The paper showed that alcoholic individuals often have hostile attribution bias because alcohol breaks the processing of threat-related information that facilitates alcoholic individuals misinterpreting unclear interpersonal cues.^[28] Therefore, this patient clearly demonstrated hostility and negative thinking. For example, the patient asked the nurse why the staff

were overbearing and looked down on him. Regarding personal value (beliefs), the patient believed that starting a fight would win him the respect he felt he had lost. In summary, the patient's gender, age, hostile attribution, and personal value contributed to the potential aggression.

4.2.2 Situation

A situation consists of aggressive cues that interact with the person elements described above and are affected by distal developmental factors.^[14] In this case, a bad mood as a cue was increased by anxiety and irritability that stemmed from symptoms of alcohol withdrawal (biological modifiers) and enhanced by frustration over the lack of a job, financial difficulty, and poor family function (environmental modifiers). Moreover, the patient wanted to leave the hospital but was not allowed to do so by the physician. Therefore, the patient had a desire to start drinking alcohol again. This type of incentive increases the degree of aggression. Notably, one of the patient's peers had an antisocial personality disorder and provoked the patient into a potential fight with the staff. Therefore, when these specific situations were combined with the person factor (*e.g.*, hostile attribution) and the uncomfortable environment (*e.g.*, poor air-conditioning, noise, a sealed room, and the small amount of space between patients), the patient may have felt that the situation was threatening to him. Consequently, all cues prompted potential aggression.

4.2.3 Present internal state

The present internal state includes affect (mood and emotion), cognition, and arousal. Because of person and situation factors, this patient's cognition (hostile attribution), mood, and emotion showed anger and anxiety that may facilitate aggression. Based on the excitation transfer theory, if two arousing events occur simultaneously, the first event may have a relationship with anger but the second event can be misattributed to anger.^[14] In this case, the patient was angry because he had to stay in the hospital (the first event), thereby affecting psychological arousal. When he became dissatisfied with staff attitudes (the second event), the patient self-generated the label of anger. Therefore, he transferred the anger from the first event to the second. He projected his anger to the staff and felt predisposed to attack them. Regarding cognition, which stems from social learning theory and script theory, the patient's aggressive scripts based on childhood experiences should be considered. However, information on this patient's childhood was incomplete and, therefore, difficult to analyse. In summary, this case created the effects of anger, anxiousness, hostile thoughts, and psychological arousal that influenced one another and probably heightened the level of the potential aggression in the present internal state.

4.3 Outcome

The final stage generates immediate appraisal because of anger-related affects and a reappraisal goal (*e.g.*, intention to gain respect and achieve needs through violence). This patient implemented the reappraisal and reconsidered because he knew that if he was violent towards the staff, he may be blamed by the physician or forced to stay in the hospital longer. He was concerned about the physician's opinion. A survey showed that Taiwanese patients regard doctor-patient relationships as paternalistic or informative. Physicians can offer information and treatment, and Taiwanese patients like to follow physicians' orders.^[29]

In the reappraisal circle, the nurse found that patient's anger increased. The nurse perceived the odd interaction dynamic between the patient and the peer with substance use and an antisocial personality disorders. The nurse realized this patient had never previously exhibited violent behaviour and was being provoked by the peer with an antisocial personality. At this point, the nurse, as the patient's social contact, interviewed and encouraged the patient to not be an aggressor. The nurse reminded the patient that he had experienced positive results with treatment in the past. At this stage, the nurse succeeded in stopping the reappraisal circle towards violence and led the patient to the correct decision. This may feed back to the patient's life scripts or guide the next episodic cycle.

5. DISCUSSION

The GAM evaluates the potential causes and processes of potentially aggressive behaviour in specific contexts. This case study has important clinical implications for nurses in helping them decide which assessments or nursing interventions can be applied in potentially aggressive situations.

For the present case study of a patient with alcohol use disorder, health providers should focus on awareness and assessment of biological and environmental modifiers. Nurses can consider the physical problems of patients from the perspective of the biological modifiers that could cause these patients to act aggressively, such as the causes of delirium (*e.g.*, drug intoxication, electrolyte disturbances, infection, metabolic abnormalities [hypo- or hyperglycaemia], respiratory or cardiovascular disease [hypoxia], and neurological illness [stroke or subdural haematoma])^[30,31] Roberson^[26] has suggested that nurses should consider the caring principles of alcohol use disorder, which are the provision of suitable treatment and nutritional care (*e.g.*, medicine may cure alcohol withdrawal) and the management of the acute illness, such as arrhythmias. From the environmental modifier perspective, nurses should assess the background of patients, such as family, parenting, associations with antisocial peers,

any history of violence, and surroundings. In this case, the information regarding the patient's childhood was insufficient for analysis. Moreover, consideration should be given in this case to separating the patient from his peers who have personality or alcohol use disorders.

The proximate episodic factors in this case (*e.g.*, when the staff asked the patient to follow the rules of the hospital) caused the patient's hostility. Similarly, Bowers *et al.*^[32] summarized evidence showing that the rules of the involved psychiatric units posed an imposition that could trigger patient violence because patients felt that the enforcement in the unit was cruel, unpredictable, punitive, and serious. The patient also complained that the uncomfortable environment (*e.g.*, noise, overcrowding) was causing anxiety and anger. Based on milieu therapy, certain interventions can be planned by nurses at this stage, such as providing suitable environmental features (avoiding noise and high temperatures), preparing an appropriate space or room, and building interpersonal relationships with patients.^[33] Therefore, health providers should create rational rules and comfortable environmental features in psychiatric units and show friendly attitudes towards patients as a necessary approach to release aggressive proximate factors.

However, friendly attitudes of staff cannot prevent violence in every type of patient. For example, schizophrenia patients with positive symptoms (*e.g.*, persecution delusion)^[34] may act impulsively or become violent very quickly. In another case, although nurses showed good attitudes towards a male patient with alcohol use disorder, the patient displayed tattoos that were threatening (verbal violence) to the staff. Interestingly, a male care assistant showed his tattoos which succeeded in stopping the threats. Traditional tattoos have symbolized shows of force in defending other groups in Taiwanese society since the Japanese occupation, particularly by gangsters.^[35]

In the present internal state, the patient's affect turned to anger and hostility because the patient mislabelled the nurse's attitudes. When nurses cannot identify the signs of aggression, the outcome stage continues, and unthoughtful patients might demonstrate impulsive actions. In both the present internal and outcome stages, nurses should be aware of a patient's state and offer suitable interventions, such as guiding a patient talk about his or her feelings, assisting a patient to exert internal control over anger, diffusing anger before the patient loses control, and encouraging patients to not harm other people.^[33] Therefore, patients will learn a new strategy to cope with anger as a new life script. If the patient's aggressive scripts change, aggressive behaviour will decrease in the future.

There are several limitations in this study because numerous aggressive factors could not be included, and some viewpoints were based on personal experiences without evidence. The details of the patient's childhood were not known, and the lack of family function and the complicated relationship between the patient and the staff could not be described more clearly because of space limitations.

6. CONCLUSION

In conclusion, it is difficult to make a decision regarding the most suitable point at which to assist patients in escaping the aggressive cycle. In this case study, various elements of the GAM required different nursing tasks. Before patients arrive in psychiatric wards, nurses should identify aggressive biological and environmental modifiers. Certain preparations can be taken, such as assessing a patient's background and treatment history and providing nutritional support. Person and situation elements require the careful assessment of aggressive warning signs, adequate environmental features, and developing a good rapport with patients. The elements of the internal state require understanding the intangible operations involving a patient's psychological status. If nurses

can comprehensively understand and manage patients' psychiatric or physical histories and internal states, they could more easily understand current patient emotions, feelings, and thoughts. At the outcome stage, it is crucial to identify the right timing to intervene with aggressive patients to prevent violence. This model has advantages for detecting the warning signs of aggression and has value in for modifying patients' life scripts towards violence. Therefore, the GAM can be a useful model for designing aggression management material for continuing education courses for nurses and for further research to standardize aggression management in different settings.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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