Morineau T, Taine M. A crisis response model for first responders to acute stress reactions based on the behavior–affect–sensation–knowledge framework. *Health Psychology Research.* 2026;14(1):e81240050
https://doi.org/10.14440/hpr.0345

Research Article

A Crisis Response Model for First Responders to Acute Stress Reactions Based on the Behavior–Affect–Sensation–Knowledge Framework

Thierry Morineau[1]*, Margot Taine[2]

[1]Psychology Laboratory: Cognition, Behavior, Communication, Southern Brittany University, Lorient 56100, France

[2]Normandy Regional Medical and Psychological Emergency Unit, Public Institution of Mental Health, Caen-East Hub, Caen 14000, France

Keywords: Behavioral signs, Behavior–affect–sensation–knowledge framework, Crisis intervention, Dissociation, Psychological aid, Rescuer

Health Psychology Research

Vol. 14, 2026

Background

First responders, including emergency medical workers, firefighters, and police officers, are frequently confronted with victims experiencing acute stress reactions (ASRs). Although they are not mental health professionals, they are required to address these situations to ensure the well-being of victims, prevent escalation, and protect themselves from secondary trauma. Current crisis intervention models for non-mental health professionals rely on either generic guidelines or fixed interaction scripts when engaging with victims.

Objective

This study examines the potential of a rule-based model that links ASR symptoms to intervention techniques, grounded in the behavior–affect–sensation–knowledge (BASK) framework. We hypothesize that a BASK-based intervention model would be well-suited for non-professional healthcare providers.

Methods

After developing and operationalizing the model, an initial assessment was conducted to evaluate its accessibility to novices following a short training session. A sample of 43 students attended a lecture on acute stress, followed by a series of identification tasks. After a training phase, participants were asked to identify both behavioral ASR signs and intervention techniques.

Results

The results indicate high overall accuracy in identifying behavioral signs and intervention techniques. However, a lack of reliability was observed among items from the same BASK component.

Conclusion

A theoretical comparison between the BASK model and other approaches highlights the relevance of a rule-based model. However, the reliability of identifying the underlying BASK processes in victim behavior and intervention techniques still requires further development.

1. INTRODUCTION

Given their professional context, first responders—including emergency medical workers, firefighters, and police officers—are frequently confronted with situations involving victims or witnesses exhibiting acute stress reactions (ASRs).[1,2] According to the International Classification of Diseases, ASR encompasses symptoms, such as autonomic signs of anxiety (e.g., tachycardia, sweating, flushing), disorientation, confusion, sadness, anxiety, anger, despair, overactivity, inactivity, social withdrawal, or stupor.[3] Fundamentally, an ASR represents a natural response when

***Corresponding author:**
Thierry Morineau
Psychology Laboratory: Cognition, Behavior, Communication, Southern Brittany University, Lorient 56100, France.
E-mail: thierry.morineau@univ-ubs.fr

exposed to an event or situation of an extremely threatening or horrific nature. When an individual's coping mechanisms are overwhelmed by the traumatic event, mental health may be compromised, potentially leading to acute stress disorder or post-traumatic stress disorder, with possible long-term mental health consequences.[4]

Regardless of the severity of the victim's reaction, first responders are often required to perform psychological crisis interventions. This intervention is crucial for several reasons. Primarily, it aims to stabilize the victim's emotional state.[5] Second, a victim experiencing acute stress necessitates additional relational support from the rescue team. If the victim is unwilling or unable to cooperate, this may impede the mission's progress. Such crisis situations can alter mission priorities, as rescuers must prioritize maintaining control of the scene.[6] Finally, repeated exposure to ASRs may cause first responders to develop vicarious trauma or moral injury.[7,8] If first responders feel inadequately prepared to manage these situations, they may experience heightened stress.[9,10]

Overall, inadequate training in crisis intervention may lead to inappropriate interactions between first responders and those in crisis at the scene. Non-mental health professionals often develop their own conduct rules based on empirical experience[11] or folk psychology principles.[12] Common practices, such as requiring an agitated individual to sit down, offering reassurance despite the gravity of the situation, or asking victims to recount their experiences, can sometimes produce counterproductive effects, including emotional escalation.[13,14] Crisis intervention models that provide guidance on managing individuals in a state of acute stress offer a significant solution to this challenge.

2. LITERATURE REVIEW

2.1. CURRENT CRISIS INTERVENTION MODELS

Raphael[15] proposes classifying crisis intervention models into two distinct approaches: The individual and the generic approaches.[4]

The individual approach involves a tailored assessment of the victim's psychological state, necessitating a certain degree of psychological expertise. However, integrating a psychologist into a first responder team daily is often impractical, although it would be ideal.[16]

Consequently, rescue teams typically rely on a generic approach. In practice, this generic approach can be implemented in two ways: By providing general recommendations or by defining a generic interaction script applicable to a class of situations.

General recommendations are commonly found in early-intervention manuals designed for non-mental health professionals, such as Mental Health First Aid,[17] the World Health Organization's Psychological First Aid,[18] or the Psychological First Aid protocol.[19,20] These guidelines aim to provide physical and mental comfort to the victim. While general recommendations outline the do's and don'ts for first responders, they lack structured guidance for specific interactions with individual victims.

Another method to guide non-professionals is to provide a standardized interaction script that can be systematically applied. An interaction script is a standardized sequence of actions to be carried out with the victim to help them overcome an ASR, regardless of the specific symptoms they present.

In this context, the 6C model invites victims to describe what they experienced (cognition, communication), perform a simple task (challenge), make a simple decision (control), and then become aware of the sequence of events through a description in temporal order (continuity), while providing emotional support (commitment).[21]

The YaHaLOM technique is a variation of the 6C method, with an interaction script specifically designed to address a state of fright.[22,23] This script was developed for soldiers on the battlefield, and techniques inspired by this model have been internationally adopted by several armies.[4]

The possibility of proposing a standardized interaction script is based on neuropsychological arguments. In all cases, the same neuropsychological process would allow for recovery from an ASR. Psychological intervention must induce, at the cerebral level, a shift from emotionally driven processing of the traumatic event, mediated by subcortical structures, particularly the amygdala, to processing that engages executive functions in the prefrontal cortex.[24] The interaction script would allow the victim to regain control over their emotions through the explicit expression of those emotions, decision-making, and controlled action.

However, triggering an interaction script exclusively focused on this neuropsychological process does not necessarily meet the needs of all victims. The crisis management model called memory structuring intervention, initially based on the shift to controlled cortical processing, has proven ineffective in individuals experiencing sympathetic hyperarousal during an ASR. Notably, higher activation of the sympathetic nervous system occurs during hostile or aggressive behaviors among victims.[25] This led the authors of the memory structuring intervention to add a vagal breathing step, to inhibit the sympathetic nervous system and activate the parasympathetic nervous system through slow breathing exercises.[26,27]

These findings demonstrate that applying an invariant interaction script, regardless of the person's particular symptoms, has limitations. Treating the state of fright observed in some battlefield victims required an adaptation of the 6C method, and managing victims in sympathetic hyperarousal necessitated the addition of a relaxation step. In this vein, it is worth noting that in the field of stress management in everyday situations, the performance optimization techniques method proposes selecting a specific type of intervention based on whether the person is in a state of hyperactivation or hypoactivation. The objective is to achieve neuropsychological balance.[28]

Therefore, our objective is to explore the possibility of designing a crisis intervention model based not on an invariant interaction script, but on a set of conditional rules that link an acute-stress reaction profile with an appropriate intervention technique. This approach could be likened to a simplified individual approach, similar to those implemented by healthcare professionals. We propose using the behavior–affect–sensation–knowledge (BASK) clinical model and the concept of mental dissociation to develop this rule-based intervention model.

This study addresses two issues. The first issue is conceptual: Is it possible to have a clinical model that allows for the selection of appropriate intervention rules, one that is not limited to a general process based on changes in the level of neuropsychological control? The second issue is operational: Is it possible to offer first responders an easy-to-use model based on the application of intervention rules according to their own initial diagnosis of the patient's ASR symptoms?

The following section presents the concept of mental dissociation as described by Janet,[29] as well as the BASK model proposed by Braun.[30,31] We hypothesize that these clinical concepts can serve as the basis for psychological intervention guidelines.

2.2. CLINICAL FOUNDATIONS

Our intervention model is based on a categorization of both acute stress signs and intervention modalities that have been documented in the literature. The aim is not to introduce new diagnostic or intervention elements but to structure existing knowledge and practices into a coherent and operational framework. The central concept around which this categorization revolves is mental dissociation.

Mental dissociation, as initially defined by Janet,[29] extends beyond the usual characterization of depersonalization-derealization disorders.[31] Psychological trauma is intrinsically linked to mental dissociation. When faced with a serious event, an inappropriate reaction may result in a breakdown in cognitive functioning. Thought processes may fail to synthesize perceived and stored information, disrupting the integrated flow of consciousness. This dissociation is an elementary response to coping with a traumatic event, as if the brain delegates part of its resources to the isolated processing of the event. In the theory of structural dissociation, this part is referred to as the emotional part of the personality.[31] Dissociation can logically lead to the forgetting of certain aspects of the event, as they are not processed by a part of the consciousness.

A model describing the dissociation process is the BASK model, which distinguishes four components of thought or processes: BASK.[30-34] These components can become dissociated from each other. In everyday situations, dissociations can occur without pathological effects, such as when an individual engages in cognitive automatisms, such as driving (predominance of behavior and sensation processes), while intensely discussing with a passenger (predominance of knowledge and affect processes). Dissociation is also central to specific situations, such as hypnosis or an adapted fear reaction. However, dissociation can become pathological if part of the brain remains uncontrollably attached to the experience of an event, separating over time from the other components of the mind. These separations induce incongruence in overall brain functioning, with varying and intense effects that can lead to poly-fragmentation of mental activity, potentially resulting in multiple personality disorders.

On a therapeutic level, the BASK model focuses on mental integration. The clinical goal is to achieve active congruence between all BASK psychic processes to rebuild mental integrity. In this context, the BASK model is consistent with the underlying therapeutic logic of techniques, such as eye movement desensitization and reprocessing.[35,36]

3. METHODS

3.1. MODEL OPERATIONALIZATION

The operationalization of the BASK model as a framework to guide crisis intervention requires a precise definition of the processes involved. Unfortunately, Braun's work does not provide formal definitions. Indeed, the characterization of these processes has been primarily conducted through their application to illustrative clinical cases, particularly in the field of multiple personality disorder.

We propose a definition of BASK processes through a specification of behavioral signs and associated intervention modalities, referred to as "countermeasures." Moreover, we propose to underscore the fright state as a specific state combining several BASK processes. Stupor is a typical mental state that can be observed among victims facing a traumatic event.

Here are the BASK components that we propose to revisit in the context of crisis intervention:

(i) Behavior process. Refers to the individual's actions expressed through gestures, movements, displacements, decision-making, and action plans. The decision or action plan is a mental simulation of actual action. Symptoms associated with this process may include agitation, overactivity, flight, and aggression.

(ii) Affect process. Expressions of emotions are often easily identifiable through facial expressions, such as fear, crying, screaming, and emotional distress.

(iii) Sensation process. Relies on a perception process. Perception is based on two mechanisms that link stimuli to semantic representations in memory: A "bottom-up" or "data-driven" mechanism, which starts from the stimulus to activate a representation in memory, and a "top-down" or "knowledge-driven" mechanism, in which prior knowledge enriches stimulus perception. Sensation is defined as relying on bottom-up mechanisms, with symptoms, such as hyperarousal, irritability, and an anxious search for information about the situation.

(iv) Knowledge process. The top-down mechanism of perception falls under the knowledge process. In an alert state, the individual constantly perceives aspects of the world around them. However, this perception can sometimes be overly subjective and/or selective because it is strongly influenced by a "top-down" or "knowledge-driven" process in which knowledge plays a role in filtering reality. Many people have experienced being immersed in their thoughts while performing another activity. Staying focused on one's subjective point of view or habits, or using defense mechanisms, such as scotomization, are ways of coping with unassimilable reality.

(v) Fright state. It can be considered a specific state that combines several of the above processes. In his clinical descriptions, Braun frequently analyzed the involvement of several BASK processes to explain clinical patterns. In the case of the fright state, we can consider that the victim is both engaged in strong emotional and sensory activation (Affect + sensation), while presenting a behavioral inhibition and reduced meaning-making of the situation.

Based on this taxonomy, Figure 1 summarizes the intervention logic. In the face of an ASR, the goal is to avoid mental dissociation by facilitating mental integration. Specifically, this involves classifying the salient behavior as referring to one or more mental processes involved (behavior, affect, sensation, knowledge, and fright). Next, the intervention technique involves activating a process from another process category—except for fright—to facilitate mental integration. This intervention is a type of "countermeasure" aimed at counterbalancing the salient process engaged in the victim's reaction. For example, a countermeasure can be to ask an agitated person (a behavioral sign belonging to the behavior process) to express themselves (knowledge process) or to ask a person with a cognitive distortion ("We are all going to die!"—knowledge process) to

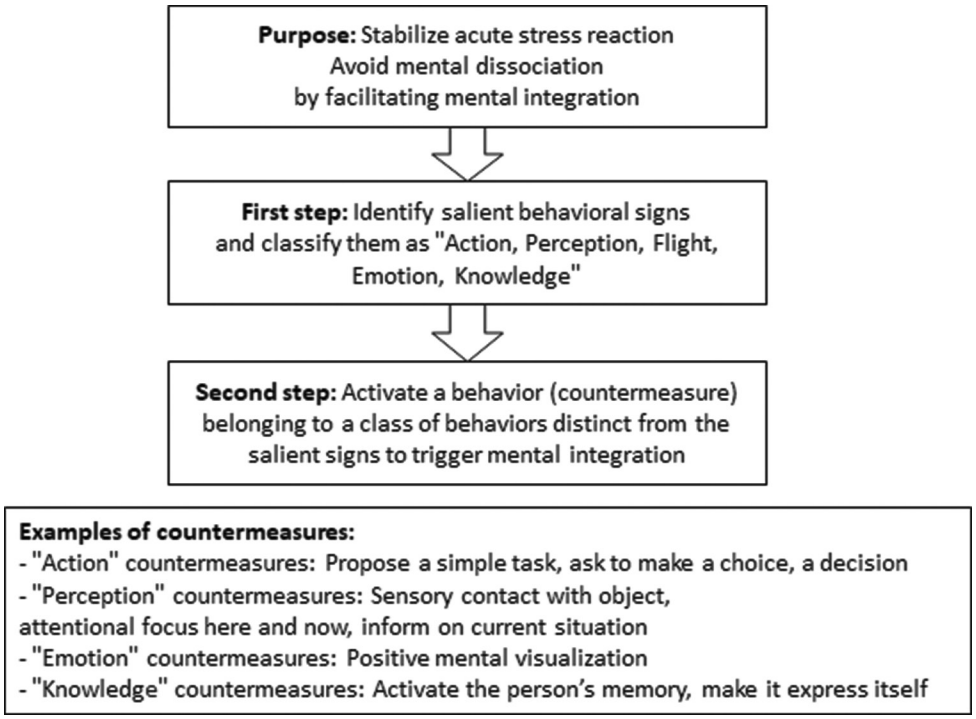

Figure 1. A crisis response model to cope with acute stress reaction, with examples of countermeasures to reduce the risk of mental dissociation
Abbreviation: BASK: Behavior–affect–sensation–knowledge.

focus on the perception of the environment, here and now (sensation).

It should be noted that this intervention model also implies the following rule: Do not activate the dominant component in the victim's behavior. In other words, do not invite them to sit when they are overactive (behavior), do not inform them about the status of the situation if they are in a state of hyperarousal (sensation), and do not ask them to describe what they feel if they have cognitive distortion or intense emotions (knowledge). In practical terms, it is about "not pressing where it hurts."

In the following section, we present a preliminary experiment designed to evaluate the ease of classifying ASRs using the BASK model and categorizing intervention techniques according to this conceptual model. The intervention model must be simple. First responders must be able to easily recall components of intervention rules, even in stressful or high-pressure work environments.

3.2. STUDY DESIGN

We present an exploratory study conducted among young students who were complete novices in this field. The objective was to measure their ability to categorize behavioral signs and intervention techniques based on the proposed model. This initial study also presents possible countermeasures, based on the literature, that can be employed according to the behavioral signs exhibited by a victim.[37] However, it should be noted that this preliminary experiment did not test the ease of applying the rules governing the intervention, i.e., "If stress reaction X, then apply technique Y."

3.3. PARTICIPANTS

The sample consisted of 43 students (five males and 38 females) aged between 18 and 21, in their 1st year of a bachelor's degree in Healthcare and Social Action, preparing them for future careers as social workers and care managers. The study took place as part of a practical course on stress. The objective of this session was to present ASR and, in this context, the proposed crisis response model, accompanied by small exercises in the form of answering questions.

3.4. PROCEDURE

During a 1-h and 45-min session, the students attended a lecture on ASR, followed by a set of identification tasks based on the "BASK and Fright" processes.

The sequence of identification tasks was as follows. First, during a training phase, participants identified three salient behaviors of children described by paramedic teams (inspired by Murphy and King[11]) and four behaviors of aircraft passengers who attempted to open an aircraft door in flight, as reported in international media. Feedback on expected responses was provided to the participants after they completed the task. Then, the test phase comprised eight videos (one introductory video and seven test videos) of about 1 min each. Each video presented a scenario of a victim in an overall context of an attack in a supermarket and received by first responders for psychological triage. Each victim was played by an actor. These videos were sourced from a previous experiment.[38] In the next phase, the participants classified 11 intervention techniques that were used as possible countermeasures (one introductory and ten test techniques) utilizing the BASK model.

3.5. MATERIAL

During the exercises, participants were given a sheet of paper describing the elements of the crisis intervention model and another sheet to write their responses to the identification tasks. After data collection, students received

an overall correction to ensure the pedagogical objective of this exercise was met.

To facilitate the understanding of the BASK components, we adapted the conceptual terms presented to the participants. The term "behavior" was replaced with "action," as "behavior" is a very general term in French that can be ambiguous. The term "sensation" was replaced with "perception," as "sensation" is semantically close to affect or emotion, and could therefore lead to confusion. The term "affect" was replaced with "emotion," which is more familiar and accessible to non-academic audiences. In the results, we reclassified the findings according to the original BASK classification.

Tables 1 and 2 describe the content of the series of task identifications, which was delivered to participants via a slideshow projected on screen. In the behavioral signs identification task, two videos (V02 and V05) were associated with two major processes rather than a single one, as both processes were perceived as predominant by the experts who determined the expected responses for each item. To simplify decision-making, participants were instructed to select only one process; responses were therefore considered correct if either of the two relevant processes was selected. For the intervention techniques identification task, certain keywords were highlighted in bold during the presentation to guide participants' responses. This procedure was designed to minimize ambiguity in statements, which can trigger multiple processes. The order of presentation for these items was determined randomly. The process categories were intentionally distributed unevenly to avoid deduction effects that might lead to default coding of the last item.

3.6. MEASUREMENT

Item success rates were determined by calculating the percentage of correct responses. A priori expected answers were established through collaborative consensus between two experts. One student did not complete the tasks, resulting in a final sample size of 42 participants (n = 42). Furthermore, responses exhibiting ambiguity (e.g., multiple selections) were excluded from subsequent data analysis.

Given that the data did not conform to a normal distribution, as assessed by the Shapiro–Wilk test, the overall item-level accuracy was evaluated using a non-parametric one-sample Wilcoxon signed-rank test. The alternative hypothesis posited a median success rate >0.5. For individual item analysis, performance was assessed using a right-tailed binomial test. Significance was attributed to items where the proportion of participants selecting the expected response was statistically significantly >0.5 ($p < \alpha$). This threshold was chosen due to the inherent non-independence of potential responses, as they were categorized within broader behavioral orientation classes. A two-tailed binomial test was employed to assess whether responses were evenly distributed between the two acceptable answers for video items V02 and V05. Statistical analyses were conducted using Jeffreys's Amazing Statistics Program software (version 0.19.3), which is based on the R programming language. Inter-item reliability was measured using the Fleiss' kappa index.

4. RESULTS

The average percentage of items correctly identified for behavioral signs was 89.6% (standard deviation = 17.6;

Table 1. Description of videos of the victims with expected responses

Video	Expected responses	Summary
V00 (Introductory presentation)	Adapted behavior	A customer arrived at the scene and stopped by the police. He is worried about what happened
V01	Fright	A man, frozen in the chair, stares fixedly and answers only "yes"
V02	Behavior or sensation	A woman who does not want to sit is agitated and wants to know where her son is
V03	Knowledge	A woman who does not answer the questions but focuses on completing her shopping list
V04	Knowledge	A cashier who wants to go back to work in the store
V05	Sensation or affect	The woman, hypervigilant to noises, has muffled sobs and says, "I'm afraid"
V06	Knowledge	A delivery person who absolutely wants to continue his deliveries
V07	Behavior	A woman who yells at the rescuer and wants to go help the rescuers at the scene of the attack

Table 2. Intervention techniques (countermeasures) with expected responses

Technique	Expected responses	Description
T00 (Corrected trial)	Sensation	"Put one hand on your stomach and count *how many times your belly lifts* in 30 s"
T01	Affect	A *benevolent* look, a *soothing* voice from the rescuer
T02	Sensation	"Can you describe what *you see*?"
T03	Knowledge	"*What* would you *need* right now?"
T04	Knowledge	Invite the person to say *what they have in mind*
T05	Sensation	"I ask you to *touch the object* in front of you and tell me *what you perceive*"
T06	Behavior	Engage the person in performing a simple *task*
T07	Affect	Mental visualization of a *quiet and pleasant* place
T08	Sensation	*Inform* about the event and his/her reactions
T09	Behavior	Propose alternating *muscular contractions*
T10	Sensation	"Focus and tell me what *you hear*"

Note: Keywords that were bolded in the presentation to guide participants' responses are written in italics.

Wilcoxon test: $V = 853$, $p<0.001$). The average score for intervention techniques was 72.9% (standard deviation = 16.0; Wilcoxon test: $V = 683$, $p<0.001$).

Tables 3 and 4 display the distribution of participants according to their expected responses. Overall, high performance was observed for both behavior identification and technique characterization.

The findings regarding the identification of behavioral signs demonstrated a substantial alignment with expert judgments ($p<0.001$). Further specific analyses were conducted for videos V02 and V05, for which two responses were considered acceptable.

In video V02, participants predominantly identified the Sensation process (53.8%) over the Behavior process (35.9%). However, a two-tailed binomial test revealed no statistically significant heterogeneity in this distribution ($p=0.31$). In video V05, participants significantly favored the emotional aspect of the victim's behavior (73%) over the sensation aspect (21.6%) ($p<0.003$). This outcome was unexpected, as expert raters had specifically noted the presence of hyperarousal symptoms displayed by the actor.

Regarding the categorization of intervention techniques, the coding accuracy for all items was statistically significant ($p<0.05$), except for techniques T03 ($p=0.78$) and T08 ($p=0.26$).

Technique T03 ("What would you need immediately?") was correctly identified by most participants (45.2%); however, it was also frequently miscategorized as a behavior-oriented technique (35.7%). This misclassification may arise from participants interpreting the technique as a preparatory step for action, a perception that holds some validity. Technique T08 ("Inform about the event and its reactions") exhibited a relatively low accuracy rate for correctly classifying it as a sensation process (56.4%), with 25.6% of participants categorizing it under the knowledge category. This suggests that a subset of participants equated the act of informing with the acquisition of knowledge. While this is accurate from the rescuer's perspective, as they consolidate their understanding, the victim experiences this information as a form of external communication.

Table 5 presents the reliability measurement of the items for the two identification tasks. We noticed that items intended to represent the same BASK dimension, within both the behavioral signs identification and intervention techniques, exhibited no degree of correspondence. Specifically, Fleiss' kappa values were close to zero—and in some cases negative—indicating that equivalent items within the BASK categorization did not elicit consistent responses from participants.

Table 3. Distribution of participants for victim sign identifications

Video	Behavior	Sensation	Fright	Affect	Knowledge	Total (%)	*n*
V01	0.0	2.5	95.1[a]	2.4	0.0	100	41
V02	35.9[a]	53.8[a]	2.6	7.7	0.0	100	39
V03	2.4	4.7	0.0	0.0	92.9[a]	100	42
V04	4.9	9.8	0.0	2.4	82.9[a]	100	41
V05	0.0	21.6[a]	0.0	73.0[a]	5.4	100	37
V06	7.5	5.0	0.0	7.5	80.0[a]	100	40
V07	95.0[a]	0.0	0.0	2.5	2.5	100	40

Note: [a]Expected responses.

Table 4. Distribution of participant responses for categorization of intervention techniques

Technique	Behavior	Sensation	Affect	Knowledge	Total (%)	*n*
T01	0.0	5.3	89.5[a]	5.2	100	38
T02	7.7	89.7[a]	0.0	2.6	100	39
T03	35.7	7.2	11.9	45.2[a]	100	42
T04	15.0	12.5	0.0	72.5[a]	100	40
T05	31.0	66.7[a]	2.3	0.0	100	42
T06	95.1[a]	0.0	4.9	0.0	100	41
T07	0.0	22.5	70.0[a]	7.5	100	40
T08	10.3	56.4[a]	7.7	25.6	100	39
T09	80.5[a]	12.2	4.9	2.4	100	41
T10	7.1	85.7[a]	2.4	4.8	100	42

Note: [a]Expected responses.

Table 5. Inter-items' reliability measurement according to the behavior–affect–sensation–knowledge framework

Process	Inter-signs items' reliability	Inter-techniques items' reliability	Overall items' reliability
Behavior	−0.30	0.01	−0.03
Affect	Not available	−0.19	−0.08
Sensation	−0.24	−0.01	−0.01
Knowledge	0.12	−0.33	−0.02

Note: For the affect process in the behavioral signs task, only one item did not allow for the calculation of a level of correspondence.

5. DISCUSSION

In this article, we proposed an operational definition of the BASK model components, framing them both as a tool for characterizing acute stress and as a foundation for crisis intervention techniques. This dual perspective enabled us to outline a crisis intervention model designed to facilitate psychological integration within mental activity.

To serve as a genuine cognitive aid for first responders, a model must satisfy at least the following three criteria:[39]

(i) Trust in clinical validity: The model must be grounded in evidence-based research on acute stress.
(ii) Operationality: The model must be operational and demonstrate effectiveness across various situations.
(iii) Accessibility: The model must be simple. First responders must be able to easily recall and implement intervention rules, even in stressful or high-pressure work environments.

5.1. TRUST IN CLINICAL VALIDITY

The degree of confidence varies across the clinical models used for interventions with individuals experiencing acute stress. The general recommendations offered by guidelines are often poorly reasoned from a theoretical standpoint. Therefore, the confidence that can be placed in their impact on victim care remains rather uncertain, depending on what the first responders trained in these best practices have retained.

Another approach is to conduct a debriefing with the victim immediately after the traumatic event. However, the impact of this debriefing is now being questioned by numerous studies. The victim's account and narration of events involve poorly controlled mechanisms, which can ultimately have a negative effect on the individual when the debriefing is not properly managed.[40]

One simple way to control the clinical impact of an intervention is to use a fixed interaction script. While this approach, implemented with the 6C framework, has proven useful in real-life situations and simulations, it risks framing the management of ASR from a specific perspective that fails to account for the diversity of observable clinical signs. This is particularly true when the victim presents with hyperactivity, which can be difficult to manage, especially when the interaction script itself focuses on frontal lobe activation and its motor component, e.g., asking the victim to perform a simple action. Such an instruction is, for example, difficult to implement a priori with someone who is already hyperactive or even aggressive.[41,42]

The clinical model of dissociation and mental integration of BASK components provides a novel approach to managing acute stress. Our approach is grounded in theoretical assumptions that view ASR as a potential precursor to mental dissociation. To our knowledge, the BASK model has not been applied to ASR management; prior applications have largely focused on post-traumatic stress disorder and psychological disorders involving mental dissociations, such as multiple personality disorder.

5.2. OPERATIONALITY

General recommendations or debriefing frameworks can be applied theoretically to any situation. However, the conditions for implementing this method in the field are uncertain and highly dependent on the interpretation made by the first responder. Conversely, invariant interaction scripts leave little room for improvisation in managing acute stress. Between these two extremes, the BASK model is a rule-based model. It establishes systematic rules linking observable behavioral signs to tailored intervention techniques—countermeasures intended to promote mental integration. By classifying behavioral signs and their corresponding countermeasures, the model provides broad applicability across various acute stress scenarios.

5.3. ACCESSIBILITY

A key condition for the use of a crisis intervention model is its accessibility and ease of use in real-world situations. Although the concise nature of the BASK model generally facilitates memorization and, therefore, its application, initial results indicate that completely novice participants can correctly identify behavioral signs and techniques according to the BASK model with reasonable accuracy; however, these results reveal some limitations. Significantly, most participants correctly identified the BASK process corresponding to each behavioral sign or technique. However, the reliability of the test items in reflecting a consistent BASK dimension is poor. Taken together, these two findings are unexpected.

These discrepancies can be explained by the fact that a single participant may correctly identify the BASK component in one item but fail to do so in the following item, despite the presence of the same component. However, most participants correctly identified the BASK component in each item. This lack of robustness in the tests can be attributed to semantic difficulty, such as the presence of multiple processes within the same observed behavior or technique. This could also be explained by participants being too far removed from the target user population or by insufficient training on the model before the experiment.

5.4. LIMITATIONS

A significant limitation in accessibility thus emerges with our model. The ability to correctly identify signs and appropriate techniques is central to a rule-based method. It involves determining the conditions under which a particular type of technique should be initiated. This question does not arise when applying general recommendations, conducting a debriefing, or following a standardized script. Future research should focus on testing the model with first responders, particularly the effective implementation of the rules linking clinical signs and intervention techniques.

6. CONCLUSION

A conceptual and operational comparison between the BASK model and other approaches, based on recommendations, debriefing, or a fixed interaction script, highlights the relevance of a rule-based model that links symptoms to intervention techniques. However, the reliability of identifying the underlying BASK processes in victim behavior and the available intervention techniques requires further improvement and development, particularly when applied by first responders.

ACKNOWLEDGMENTS

The authors thank the Normandy Regional Psychotrauma Center and the CN2R (Centre National de Ressources et de Résilience) for their support in documentary research.

FUNDING

This study is the preliminary phase of the IRIS research project, which will be funded by the Fund for the Integration of Disabled People in the Public Service (Fonds pour l'Insertion des Personnes Handicapées dans la Fonction Publique) starting in 2026 (Agreement n°UBS: OV: 2025_00825).

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

AUTHOR CONTRIBUTIONS

Conceptualization: All authors
Formal analysis: Thierry Morineau
Investigation: All authors
Methodology: Thierry Morineau
Writing – original draft: Thierry Morineau
Writing – review & editing: All authors

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study protocol was approved on April 10, 2025, by the research team committee of the LP3C at the University of Bretagne Sud, France (#10042025). Verbal consent was obtained from the subjects to participate in the study.

CONSENT FOR PUBLICATION

Participants consented to their data being published anonymously. They provided verbal consent.

DATA AVAILABILITY STATEMENT

The anonymized data upon which this paper is based are available upon reasonable request from the corresponding author.

Submitted: 23 October 2025;
Revision received: 10 December 2025;
Accepted: 12 December 2025; Published: 13 February 2026

REFERENCES

1. Alleaume B, Fouques D, Castillo MC, Goutaudier N. Direct and indirect traumatization in first responders: An exploratory qualitative study with firefighters and humanitarian workers. *Eur J Trauma Dissoc.* 2025;9(2):100521. doi: 10.1016/j.ejtd.2025.10052

2. Cogan N, Craig A, Milligan L, *et al.* "I've got no PPE to protect my mind": Understanding the needs and experiences of first responders exposed to trauma in the workplace. *Eur J Psychotraumatol.* 2024;15(1):2395113. doi: 10.1080/20008066.2024.2395113

3. *ICD-11 for Mortality and Morbidity Statistics 2025-01*. World Health Organization; 2025. Available from: https://icd.who.int/browse/2025-01/mms/en [Last accessed on 2025 Aug 17].

4. Adler AB, Gutierrez IA. Acute stress reaction in combat: Emerging evidence and peer-based interventions. *Curr Psychiatry Rep.* 2022;24(4):277-284. doi: 10.1007/s11920-022-01335-2

5. Uhrecký B, Kučerová V, Paksi D. "You treat your stress by doing what you're supposed to do": A qualitative inquiry into emotion regulation of paramedics and paramedic students in critical incidents. *BMC Emerg Med.* 2025;25(1):1-12.

6. Jannussis D, Mpompetsi G, Vassileios K. The role of the first responder. In: *Emergency Medicine, Trauma and Disaster Management: From Prehospital to Hospital Care and Beyond.* Cham: Springer International Publishing; 2021. p. 11-18. doi: 10.1007/978-3-030-34116-9_2

7. Padmanabhanunni A, Pretorius TB. An exploratory study of the mental health of first responders: Depression, anxiety, and post-traumatic stress disorder. *S Afr J Psychol.* 2025;55(2):257-269. doi: 10.1177/00812463251317901

8. Knobloch LK, Owens JL. Moral injury among first responders: Experience, effects, and advice in their own words. *Psychol Serv.* 2024;21(3):500-508. doi: 10.1037/ser0000838

9. Baetzner AS, Wespi R, Hill Y, *et al*. Preparing medical first responders for crises: A systematic literature review of disaster training programs and their effectiveness. *Scand J Trauma Resusc Emerg Med.* 2022;30(1):76. doi: 10.1186/s13049-022-01056-8

10. Crane MF, Falon SL, Kho M, Moss A, Adler AB. Developing resilience in first responders: Strategies for enhancing psychoeducational service delivery. *Psychol Serv.* 2022;19(S2):17-27. doi: 10.1037/ser0000439

11. Murphy LM, King EK. The lived experiences of first responders during emergency events involving children: Child reactions, first responder roles, and additional needs. *J Child Life.* 2024;5(2). doi: 10.55591/001c.126258

12. Sowers AF, Clapp JD, Freng SA, Stanton K. The folk psychiatry model: Developing a measure of lay perceptions of PTSD. *Psychol Assess.* 2023;35(12):1120-1133. doi: 10.1037/pas0001274

13. Murray CH, Contreras JL, Kelly CH, Padgett DK, Pollack HA. Behavioral crisis and first response: Qualitative interviews with Chicago stakeholders. *Community Ment Health J.* 2023;59(1):77-84. doi: 10.1007/s10597-022-00990-2

14. Oliva JR, Morgan R, Compton MT. A practical overview of de-escalation skills in law enforcement: Helping individuals in crisis while reducing police liability and injury. *J Police Crisis Negot.* 2010;10(1-2):15-29. doi: 10.1080/15332581003785421

15. Raphael B. Crisis intervention: Theoretical and methodological considerations. *Aust N Z J Psychiatry.* 1971;5(3):183-190. doi: 10.3109/00048677109159643

16. Arjmand HA, O'Donnell ML, Putica A, *et al*. Mental health treatment for first responders: An assessment of mental health provider needs. *Psychol Serv.* 2024;21(3):489-499. doi: 10.1037/ser0000832

17. *Traumatic Events (Adult): Mental Health First Aid Guidelines*. Revised 2019. Australia: Mental Health First Aid Australia; 2022.

18. *Facilitation Manual: Psychological First Aid During Ebola Virus Disease Outbreaks*. World Health Organization; 2024. Available from: https://www.who.int/publications/i/item/9789240101234 [Last accessed on 2025 Aug 17].

19. Hobfoll SE, Watson P, Bell CC, *et al*. Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry.* 2007;70(4):283-315. doi: 10.1521/psyc.2007.70.4.283

20. Wang L, Norman I, Xiao T, Li Y, Leamy M. Psychological first aid training: A scoping review

of its application, outcomes and implementation. *Int J Environ Res Public Health.* 2021;18(9):4594. doi: 10.3390/ijerph18094594

21. Farchi M, Gidron Y. Effects of the six C's psychological first aid model on acute stress responses in a simulated emergency situation. *Prehosp Disaster Med.* 2023;38(S1):S121-S122. doi: 10.1017/S1049023X23003242

22. Svetlitzky V, Farchi M, Ben Yehuda A, Adler AB. YaHaLOM: A rapid intervention for acute stress reactions in high-risk occupations. *Mil Behav Health.* 2020;8(2):232-242. doi: 10.1080/21635781.2019.1664356

23. Adler AB, Gutierrez IA, McCuaig Edge H, *et al*. Peer-based intervention for acute stress reaction: Adaptations by five militaries. *BMJ Mil Health*. 2024;170(6):425-429. doi: 10.1136/military-2022-002344

24. Farchi MU, Bathish L, Hayut N, Alexander S, Gidron Y. Effects of a psychological first aid (PFA) based on the SIX Cs model on acute stress responses in a simulated emergency. *Psychol Trauma.* 2024;17(4):897-903. doi: 10.1037/tra0001724

25. Svingen E. PTSD and crime propensity: Stress systems, brain structures, and the nature of the relationship. *Heliyon.* 2023;9(7):e18381. doi: 10.1016/j.heliyon.2023.e18381

26. Gidron Y, Farchi M, Arie E, Husien A, Berends K, Hubloue I. Effects of a memory structuring plus vagal breathing intervention on acute stress reactions: Three controlled trials. *Ment Health Fam Med.* 2018;13:699-707.

27. Golan MR. *Effects of the Memory Structuring Intervention With Vagal Breathing on PTSD Symptoms of ICU and ER Nurses.* Master's Thesis. University of Haifa; 2024.

28. Mikaeloff Y, Perreaut-Pierre E. *Accompagner les Soignants et les Aidants Avec Les Techniques d'Optimisation du Potentiel [Supporting Caregivers and Healthcare Professionals with Potential Optimization Techniques*]. Paris, France: InterEditions, Dunod Edition; 2025.

29. Janet P. *L'Automatisme Psychologique: Essai de Psychologie Expérimentale sur les Formes Inférieures de l'Activité Humaine* [*Psychological Automatism: An Essay in Experimental Psychology on the Lower Forms of Human Activity*]. Paris, France: Alcan; 1889.

30. Braun BG. The BASK model of dissociation: II. Treatment. *Dissociation.* 1988;1(2):16-23.

31. Van Der Hart O, Nijenhuis ER, Steele K. *Le Soi Hanté: Dissociation Structurelle et Traitement de la Traumatisation Chronique.* Bruxelles: De Boeck Supérieur; 2024.

32. Braun BG. The BASK model of dissociation. *Dissociation.* 1988;1(1):4-23.

33. Van der Hart O, Dorahy MJ. History of the concept of dissociation. In: Gold SN, Dorahy MJ, O'Neil JA, editors. *Dissociation and the Dissociative Disorders*. 2nd ed., Vol. 1. London: Routledge; 2023. p. 13-38. doi: 10.4324/9781003057314-3

34. Kluft RP. Toward the effective treatment of dissociative symptoms and dissociative disorders. *Psychoanal Soc Work.* 2023;30(1):3-31. doi: 10.1080/15228878.2022.2095876

35. Solomon RM, Shapiro F. EMDR and the adaptive information processing model-potential mechanisms of change. *J EMDR Pract Res.* 2008;2(4):315-325. doi: 10.1891/1933-3196.2.4.315

36. Braude SE. The conceptual unity of dissociation: A philosophical argument. In: Gold SN, Dorahy MJ, O'Neil JA, editors. *Dissociation and the Dissociative Disorders*. 2nd ed., Vol. 1. London: Routledge; 2023. p. 13-38. doi: 10.4324/9781003057314-3

37. *Recommandations PSE*. French Ministry of the Interior; 2023. Available from: https://mobile.interieur.gouv.fr/Le-ministere/securite-civile/documentation-technique/secourisme-et-associations/les-recommandations-et-les-referentiels [Last accessed on 2025 Jan 20].

38. Morineau T, Taine M, Cainjo T. Towards a behavioural screening tool for primary psychological triage. *Int J Psychiatry Res.* 2023;6(4):1-6. doi: 10.33425/2641-4317.1169

39. Morineau T. *Cognitive Aids to Support Health Professionals.* United States: John Wiley & Sons; 2024.

40. Vignaud P, Lavallé L, Brunelin J, Prieto N. Are psychological debriefing groups after a potential traumatic event suitable to prevent the symptoms of PTSD? *Psychiatry Res.* 2022;311:114503. doi: 10.1016/j.psychres.2022.114503

41. Schauer M, Elbert T. Dissociation following traumatic stress. *Z Psychol.* 2015;218(2):109-127. doi: 10.1027/0044-3409/a000018

42. Caruso R, Antenora F, Riba M, *et al*. Aggressive behavior and psychiatric inpatients: A narrative review of the literature with a focus on the European experience. *Curr Psychiatry Rep.* 2021;23(4):29. doi: 10.1007/s11920-021-01233-z