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Rethinking trauma: A case series and proposed refinements to criterion A for post-traumatic stress disorder in DSM-5

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Abstract

The traumatic event is a core requirement in the diagnosis of Post-Traumatic Stress Disorder (PTSD), and is defined in the Diagnostic and Statistical Manual's (DSM's) criteria of PTSD as Criterion A. This remains the case, despite opposing views from prior literature that the trauma response can occur without Criterion A. This article explores a definition for psychological trauma, from its etymology to a historical perspective, before examining the evolution of PTSD's Criterion A across time in various editions of the DSM. The concept of moral injury is also examined, in terms of its correlation with psychological trauma and its impact on the pathological trauma response. A case series of vignettes from the authors' clinical experience is presented, where PTSD symptoms have been noted in the absence of Criterion A. This is supplemented by the authors' analyses about how the various life adversities across the cases fall short of Criterion A. Two key features (the imminence of a perceived threat, and the perceived loss of control experienced as a result) of a traumatic event are proposed to refine the definition of psychological trauma. It is hoped that these would serve to improve the current understanding and definition of psychological trauma.

Keywords: Psychological trauma; Traumatic event; PTSD.

Introductions

Traumatic events were identified to overwhelm the ordinary human adaptations to life [1]. These generally involved threats to life or bodily integrity, or a close personal encounter with violence and death. They were understood to carry the potential for greater impact than commonplace misfortunes, evoke responses of catastrophe and confront human beings with the extremities of helplessness and terror.

Over the years, there have been significant advances in the field of psychological trauma and its resultant impact. It is not possible to fully appreciate these advances without a clear understanding of what psychological trauma actually is. This provides a foundation to make sense of the malady it gives rise to, complete with its associated symptomatology.

A definition for psychological trauma readily utilized in both clinical practice and research is found in the Diagnostic and Statistical Manual (DSM) through its Criterion A of the diagnostic criteria for Post-Traumatic Stress Disorder (PTSD). Under the DSM, PTSD cannot be diagnosed in the absence of a traumatic event which fulfils Criterion A.

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Criterion A involves "Actual or threatened death, serious injury or sexual violence". The traumatic event can be directly experienced, witnessed in person, indirectly experienced via learning of a violent or accidental event affecting a close friend or relative, or through repeated or extreme exposure to aversive details.

Use of Criterion A has faced criticism by authors who have conducted prior reviews of the PTSD criteria in DSM [2] and argue that PTSD symptoms (listed as Criterion B to Criterion E in DSM), which are at least equivalent in typology and impact, can and do emerge in the context of life adversities which do not meet criterion A. Some of the examples cited include extramarital affairs [3], infidelity in unmarried adults [4], and sexual harassment [5].

Recounting the etymology of trauma and its historical roots serve to provide a preliminary understanding, followed by the developments across time in both military and civilian domains that shape our current understanding of trauma. This leads on to the journey taken by PTSD through the various iterations of the DSM, with emphasis on how the psychological trauma event is defined.

Moral injury is an entity often correlated with PTSD. A contemporary overview of this topic serves to demonstrate its complex role in mediating between adversity, particularly those which do not meet Criterion A definition, and subsequent PTSD symptoms.

These serve as the backdrop to the case series, with adversities in the respective vignettes evaluated in terms of their eligibility to meet Criterion A and the role of moral injury in their presentation. This reflective process poses questions about the current understanding of psychological trauma's defining features, which finally leads to insights proposed for consideration.

Etymology of trauma

The word "Trauma" stands for a wound. It has Proto-Indo-European roots, with **trau-* stemming from **tere-*. **Tere-* has two different meanings, the first of which is to rub, grind, or perforate and the second to overcome or go through [6,7]. In the context of a traumatic event, it has the potential to punch through a person's defense. This is intuitively understood in the physical context, where an injury inflicted by an external agent would have to be of a fair degree of severity to damage living tissue. In doing so, this would mostly necessitate having to breach the body's protective defense, in the form of the skin.

The analogous parallel in the non-physical context, a concept which only emerged much later on, would be an external event breaching one's emotional defenses to inflict psychological injury. Likewise, this informs about the devastating impact of the traumatic event on one's psyche – having to be of a comparable severity to the physical injury.

Historical perspective on trauma

The earliest depiction of post-traumatic stress conditions resulting from severe combat trauma was likely to have come from the prominent ancient Greek sophist Gorgias (483 - 376 BC). Through his literary work, *Encomium of Helen* [8], he provided an account of how the mere sight of the enemy's battle formation would strike fear and trouble the soul of soldiers, causing them to "Abandon their present composure" and often flee from the impending danger as though it were already upon them.

This fear left the fleeing soldiers terrifying visual images inscribed in their minds that often persisted and was able to correspond to spoken words. The soldiers were said to have "Fallen into vain toils, terrible sicknesses (*nosoi*) and hard to heal madnesses (*maniai*)."

Gorgias readily identified the combat situation to be the cause for such a response. His view was that these soldiers ought not to be held responsible for their condition, which was a disease state rather than the product of weak will. In the Spartan context and culture, where cowardice was taught to be socially unacceptable, his stance was considered revolutionary.

One of the earliest possible suggestions of the impact of trauma is detailed by the Greek historian Herodotus [9]. Cleomenes was identified as psychologically slightly unbalanced (*hupomargoteros*) to begin with, even prior to his reign as Spartan king (519 - 491 BC). A brilliant tactician who had conducted many military actions and intrigues in the Peloponnesus, he had a part to play in numerous acts of extreme violence and sacrilege, such as burning asylum seekers alive in a scared grove at Argos.

In his later years, "Mad sickness fell upon him" where he struck people across the face with his staff for no reason. Cleomenes had to be chained in prison, where he convinced his guard to hand him a dagger. He then cut his own body into strips and died from suicide by self-mutilation, a gruesome end which served only to confirm his insanity. There was no definite causative explanation for his ailment, with his acquired taste for strong, unwatered wine postulated to have a contributory role; the link with his historical encounters of trauma on the battlefield are but a tenuous proposition at best.

Conventionally regarded as the father of medicine, Hippocrates from ancient Greece is credited with treatment of physical injuries sustained in war [10]. These consisted of wounds or violent tissue rupture, such as infections, broken bones, head injuries and even limb gangrene. Even while Hippocrates had attempted to classify mental disorders during the 5th century BC, with some terms that are still of relevance today, psychological causation did not factor in his classification. This was evidenced by the fact that mental disorders were ascribed to physiological causes – misbalanced bodily humours or brain trauma – and were primarily treated by physical means to purge the body of madness.

From ancient times until the 18th Century, "Trauma" referred almost exclusively to physical injury. There had been no psychological connotation to trauma whatsoever. The notion that a physical wound could evoke a psychological injury was one of the insights gained only during the 19th century.

The phenomenon of "Railway Spine", described in 1867 by the British surgeon Sir John Eric Erichsen's classic book "On Railway and Other Injuries of the Nervous System" [11], consisted of various presentations of spinal pain in passengers of railway cars involved in accidents. There was controversy about whether the effects of a terrible event were entirely due to physical

damage to the spine or brain.

Herbert Page, a British surgeon, supported the notion that certain "Railway Spine" symptoms occurred in the absence of physical injury and thus were ascribed to hysteria [12], the predecessor of today's conversion disorder. This conclusion, that physical trauma was capable of producing emotional disorders, was echoed by the French Neurologist Jean-Martin Charcot, who studied patients whose distress emerged after severe trauma, such as train crashes or wars, and served as traumatic triggers in individuals with a "diáthese" or inherited predisposition. He classified these cases with the description of "névrose traumatique" or "Hystérie Traumatique" [13].

Freud and his mentor Breuer expounded on the concept of traumatic neurosis [14], with trauma identified as a key to explain the etiology of neurosis in some of Freud's papers. War neurosis, which came to the forefront during this time, was understood by Freud to be a subtype of traumatic neurosis [15]. In Freud's "Beyond the Pleasure Principle" [16], he defined trauma as an "External excitation" having the strength to rupture the barrier against stimuli and "provoke a very extensive disturbance in the workings of the energy of the organism".

The phenomenon of "Shell Shock" first emerged around the trench warfare of the First World War, with term "shell shock" was first used in an article in The Lancet by psychologist Charles Samuel Myers [17]. Other terms such as "Not Yet Diagnosed, Nervous" (NYDN) and "neurasthenia" were also used to define the condition. Initial research attributed the condition to organic causes, as a result of microscopic cerebral hemorrhage due to exploding shells [18] and even damage to the central nervous system induced by carbon monoxide from detonations [19].

The Southborough Committee was tasked to investigate the nature of "Shell Shock", and eventually concluded that it was "a convenient evasion of duty, if not disguised malingering" [20] and not a valid diagnostic entity.

Military psychiatrists around that era regarded emotional breakdown following exposure to a traumatic event to be the individual's responsibility, with the "War Neurotic" deemed to be constitutionally vulnerable or even a product of a degenerate family [21].

A ban was even recommended on the use of the term, with "shell shock" formally outlawed by British civil and military authorities in 1939 out of concern for the impact it would have on military morale. The term became a euphemistic expression for "Hysteria", with the latter carrying the stigma of being an "essentially feminine failing" and thus unacceptable to soldiers [22]. "Battle Exhaustion" or "Combat Fatigue" was put forth as a more appropriate diagnosis during the Second World War, with the natural trajectory towards a swift and total recovery expected through recuperation alone.

Trauma in the DSM

DSM-I, the first edition of the DSM, was published amidst the Korean War in 1952 [23]. It contained the undefined entity of "Gross Stress Reaction", under the Transient Situational Personality Disorders section. It was intended as a diagnosis to be invoked on an interim basis. It was applicable to "normal persons who have experienced intolerable stress", with the examples of combat and civilian catastrophe were cited as possibilities which resulted in "severe physical demands or extreme emotional stress".

The second edition (DSM-II), published in 1968 with the Vietnam War ongoing, contained the entity "Adjustment Reaction of Adult Life" under the Transient Situational Disturbances section [24]. Its diagnosis was restricted to individuals with no apparent underlying mental disorder, and represented "an acute reaction to overwhelming environmental stress".

Both the above DSM-I and DSM-II conditions did not come with any specified symptoms or diagnostic criteria.

The 1970s was a defining period, when "Delayed stress syndrome" first started to surface. This marked a significant shift in perspective from stress, as a short-lived phenomenon with minimal sequelae, towards the recognition of trauma, which was more protracted and might have an enduring impact.

Post-Traumatic Stress Disorder (PTSD) as a diagnostic entity first came into existence in 1980 as it was included in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), with its formal recognition having changed the conceptual understanding towards trauma [25].

It has remained in the fourth (DSM-IV) and fifth editions (DSM-5), in 1994 and 2013 respectively, with alterations made to the criteria along the way [26,27]. From DSM-III to DSM-5, the list of symptoms cited has expanded from 12 symptoms across 3 groups, to 20 symptoms across 4 groups. Criterion A has been consistently used across the editions to define the traumatic stressor.

Examining the recent evolution from DSM-IV to DSM-5 serves to cast light on the shifts in prevailing sentiment about psychological trauma.

A paradigm shift in the understanding of the impact of psychological trauma is evident from PTSD's reclassification. While PTSD was designated as an anxiety disorder in DSM-IV, it came under the autochthonous "Trauma and Stressor-related Disorders" chapter in DSM-5. This was in recognition that anxiety phenotypically did not encompass the breadth of the pathological trauma response in entirety.

DSM-5 saw the additional scenario of "Actual or threatened sexual violence" embedded in what was formerly Criterion A1 in DSM-IV. While this was already clearly acknowledged as a possible form of psychological trauma before DSM-5, it was a reflection of the growing recognition that trauma can and does exist beyond its historically-military roots. Sexual violence steers the endorsement of psychological trauma further from the warzone and into the civilian realm.

DSM-IV had a two-part outline to Criterion A, which was trimmed down to a single part in DSM-5. Criterion A2 from DSM-IV, necessitating that an individual's response to the trauma having to involve "intense fear, helplessness, or horror" was subsequently removed. Research findings had justified this on two grounds. The first was that a Criterion A2 response excluded individuals who met the rest of the criteria without the subjective response. Personnel in high-risk occupations, such as soldiers, were cited as one group that, due to their training, might not develop the Criterion A2 response to trauma but were still affected enough to endorse significant PTSD symptoms [28]. The second reason for the omission of Criterion A2 in DSM-5 was that it was found not to contribute to the predictive ability of the clinical diagnosis of PTSD [29].

Moral injury and trauma

The notion of moral conflict and guilt has surfaced to clinicians attending to veterans since the 1980s [30], but there has been no consensus definition of moral injury. Emphasis on moral injury in the literature only developed following the proposed identification of potentially morally injurious experiences [31], events "Perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations". Moral injury was then highlighted in the proposed model as the distressing aftermath of such experiences. Perpetrator-based events involve either committing or witnessing actions that violate one's core beliefs [31], and tend to evoke guilt and shame. Betrayal-based events stem from a betrayal of justice by a person of authority in a high-stakes situation [32], and tend to evoke anger.

Moral injury can occur with or without psychological trauma. It has a relationship with PTSD symptoms, accounting for 9.4% of the variance in PTSD as reported in a recent meta-analysis [33]. When compounded with PTSD, treatment focused on trauma alone might not adequately address the moral injury.

Case series

The subjects in the vignettes were patients whom the authors have encountered in clinical practice. They experienced adversities resulting in clinical presentation with symptoms of PTSD, yet were not diagnosed by the authors to suffer from PTSD. They were included to facilitate deliberation about how psychological trauma ought to be defined.

As the subjects were no longer under the clinical care of the authors, and some had no further contact since they were seen years ago, the process of tracing the subjects to obtain consent posed significant challenges. Instead, they were de-identified in accordance to BMJ Standards on Anonymization, with no direct identifiers and not more than two indirect identifiers included.

Case vignette 1

This vignette involves a young law enforcement officer handling a case of reported domestic violence. When the officer interviewed the victim as part of the investigation protocol, the officer's intuition was that the victim was not entirely truthful and had downplayed the seriousness of the domestic violence. From the officer's perspective, the victim had presumably done so in the interest of closing the case in order to protect the alleged perpetrator. However, based on the victim's account the officer's superior had advised that the case be closed with no further action taken. The officer was reluctant to do so and delayed the process, but eventually complied.

As things developed over time, the officer eventually came to hear that the case had subsequently escalated into a homicide. At no point did the officer have any exposure to the crime scene or any photographs of the victim's remains.

The officer's symptoms mainly involved nightmares about the superior, with marked avoidance towards further interactions with them. This resulted in difficulty functioning at work and consequently depressive symptoms.

Case vignette 2

This vignette involves a young dental nurse who sustained a needlestick injury on the job whilst assisting a procedure. Prior to the needlestick injury, she had no history of mental illness and was able to work over 5 years on the job without issue. She had been grieving the loss of her mother 2 months ago, after her mother had passed away at home from an unknown cause. The police had brought her to her mother's residence where she insisted on viewing her mother's body, which she in turn described as "Bloated and Decomposing".

The dental patient was known beforehand to be positive for Hepatitis B. The dentist involved had only recently taken over the practice; the procedural protocol required they cap the dental scaler but they did not do so. The nurse's needlestick injury unfortunately ensued following this omission. She experienced severe anxiety, with prominent concerns of contracting Hepatitis B. While most healthcare workers in her plight would have swiftly gone for testing, her disabling fear that she had Hepatitis saw her decline this.

She has since been unable to return to work for at least for two years since the incident. Her symptom profile evolved from concerns about contracting Hepatitis B to obsessions and compulsions revolving around contamination.

Case vignette 3

This vignette involves a member of the uniformed services, who had experienced various forms of adversity in the workplace at the hands of multiple co-workers. This was over a protracted course of many years, with varying themes including sexual harassment, gender discrimination in being overlooked for a promotion, and bullying by their superior. Amidst the patient's emotional distress, close colleagues were reported to have failed to demonstrate concern about their emotional wellbeing - despite being on extended sick leave for their mental health, the patient was asked on their return to work how their holiday had gone.

The patient reported symptoms which were akin to those in PTSD, with a work-related theme. They experienced nightmares about their superior, avoidance of the workplace coupled with irritability and autonomic features of hyperarousal when relating their workplace encounters. Over the brief span of one week while inpatient, they also became uncomfortable with the treating psychiatrist, who was of the same gender as the patient's superior and had started to doubt the validity of the PTSD diagnosis, and requested a change of psychiatrist.

Case vignette 4

The final vignette involves a middle-aged woman, mother to a child of school-going age, who was seen years after her daughter had recovered from a childhood malignancy. This had been discovered during her daughter's initial hospitalization for an unrelated health condition, but required her daughter to undergo a surgical biopsy. This was shortly followed by chemotherapy and then surgical resection of the tumour.

The mother could vividly recall traversing the corridors of the hospital, accompanying her daughter who was wheeled in a hospital bed for her surgery. She had to put on a brave front each time to set her daughter at ease, whilst finding herself terrified by the prospect that her daughter might not make it out of the operating theatre.

Her daughter had been doing well, experiencing full remission from cancer for several years by the time she sought help for mental health concerns. However, she experienced frequent flashbacks and nightmares involving the pediatric hospital environment; she avoided speaking about her daughter's condition

where possible, as that tended to elicit features of hyperarousal in herself. Despite the rational awareness that her daughter's condition over the years had been fine, she continued having catastrophic thinking that the cancer would return.

Whilst she was able to hold down a job and was not experiencing pervasively-depressed mood, she acknowledged that the ongoing emotional distress over the years had robbed her of the ability to function optimally at work and in her role as a parent. A few weeks prior to each of her daughter's 6-monthly regular checkups without fail, she would exhibit an "anniversary reaction" which amounted to an adjustment disorder with anxiety. This would abate when given the good news about her daughter's clean bill of health, only to predictably recur in the weeks leading up to the next appointment.

Her experience of her daughter's cancer ordeal had distressed her to an extent such that its impact was equivalent to that of having undergone a traumatic event. It was not surprising to note that Eye Movement Desensitization and Reprocessing (EMDR), treatment generally reserved for PTSD, was deployed to good effect for this patient following a trial of Cognitive Behavioral Therapy which had yielded limited benefits.

Table 1: Summary of Adversity's Criterion A Eligibility, Moral Injury and Psychiatric Diagnosis

	Criterion A Eligibility	Moral Injury	Psychiatric Diagnosis
Vignette 1	Death of victim - Not eligible Interaction with superior – Not eligible	Perpetrator-based Betrayal-based	Major Depressive Disorder
Vignette 2	Death of mother – Eligible Needlestick injury – Not eligible	Betrayal-based	Obsessive Compulsive Disorder
Vignette 3	Workplace bullying – Not eligible	Betrayal-based	Major Depressive Disorder
Vignette 4	Sickness of child – Equivocal	None	Adjustment Disorder, Chronic

Evaluation of vignettes: Eligibility to fulfil criterion A

Vignettes 1 and 3 involved a common theme of adversity in the workplace, though their respective superiors had not placed them in any life-threatening harm. The nature of the symptoms, with content directed to the respective superiors, would suggest that it was the interaction with the superior that inflicted distress more than anything.

Vignette 3 in particular lacked a discrete event the patient had experienced which was life-threatening, injurious or violent in nature. The veracity of the account of the incidents could not be verified, especially as some of them had occurred years to decades ago.

Vignette 2 had encompassed two separate adversities worthy of examination, first the circumstances around her mother's death and followed by the needlestick injury. The dental nurse witnessing her mother's remains in the aforementioned state could undoubtedly qualify for Criterion A, though the absence of PTSD symptoms relating to this trauma obviated the PTSD diagnosis. Whilst it did not give rise to PTSD, it would have contributed to her susceptibility to the impact from the distressing event of the needlestick injury.

Needlestick injuries are undoubtedly distressing for any healthcare worker who has experienced them, and they appear to be a fairly common occurrence in dental nurses [34] The dreaded sequelae of being afflicted with Hepatitis B, ranging from chronic liver impairment to death from liver failure, would loom large and could distress any healthcare worker in this position.

Even in the hypothetical scenario where her worst fears about Hepatitis B were to come true, both the needlestick injury itself and contracting a blood-borne disease as a result do not constitute a "Sudden and catastrophic medical incident" of comparable intensity to the cited examples in DSM, such as waking during surgery or anaphylactic shock.

Vignettes 1 and 4 present the opportunity to examine Criterion A in relation to indirect exposure, a concept which had been included since DSM-III-R in 1987. Death of the victim by homicide in Vignette 1 was definitely violent, but did not hold up to scrutiny that the relationship between the officer and the victim would qualify as that of a "Close Friend ". They did not have any contact prior to the investigation, and would not have formed any deep personal relationship over a once-off interaction during a police interview.

The mother-daughter relationship in Vignette 4 would have no difficulty fulfilling the requirement for a "Close Family Member", and a peri-operative death on the surgical table could perhaps be seen as accidental. Though the surgeon had not indicated her daughter's surgical risk of mortality to be high and the imagined demise did not take place, the mother's fear and subjective perception of this possibility had a large part to play in the development of her symptomatology.

Evaluation of vignettes: Moral injury

Vignette 1 is a scenario with a heavy element of moral injury, which encompasses both aforementioned moral injury events. On one hand the officer experienced both guilt and shame towards the victim about not having probed further or done more (perpetrator-based moral injury), as well as anger towards the superior (betrayal-based moral injury). Addressing the moral injury was, in the authors' opinion, key to ameliorating the officer's distress.

Vignette 2 and Vignette 3 both have a component of moral injury of the betrayal-based theme directed towards the workplace superiors. In Vignette 2, this is directed towards the dentist who had failed in ensuring her safety during the procedure. In Vignette 3, this is directed towards colleagues and the superior over various matters in totality.

Moral injury completely did not feature in Vignette 4. The vignette serves as demonstrative proof that trauma symptoms can occur in the combined absence of trauma which fulfils Criterion A and moral injury.

Proposed features defining trauma

The adversities of varying nature and severity collectively

related across the vignettes were distressing enough to fulfil DSM's PTSD symptomatology (Criterion B to Criterion E). These vignettes serve to reiterate that the pathological trauma response thought to be characteristic to PTSD can certainly emerge in the absence of an event fulfilling Criterion A. This prompts consideration about what constitutes psychological trauma, and how Criterion A should be defined.

While DSM's Criterion A has endeavoured to formally define psychological trauma, the 11th Revision of International Classification of Diseases (ICD-11) has a different approach. ICD-11 simply offers clinical guidance with the statement that PTSD may develop following exposure to an "An extremely threatening or horrific event or series of events". This opens the door for events such as stalking, bullying, emotional abuse, rejection and neglect to be considered, which might offer a viable solution to problems that Criterion A would run into [35].

Vignettes 2 and 4 in particular raise the question about what should be utilized to determine whether an adversity qualifies as psychological trauma. This is akin to the notion of perceived lethality of a suicide attempt in risk assessment. Likewise for psychological trauma, is it the objective reality of events that do (or do not) occur, or the subjective reality of how they are experienced?.

While this is not generally a point of contention when the threat is ostensibly plausible, such as when someone is robbed at gunpoint, it becomes a point of contention when the two outcomes are vastly different. Vignette 2 involved a low likelihood of contracting a bloodborne disease through a needlestick injury, while Vignette 4 involved a low risk of surgical mortality. From the perspective of the patients, the threat in both vignettes were amplified in the subjective sense.

A hypothetical scenario would involve persecutory delusions of healthcare staff poisoning a patient experiencing delirium, and for this patient to subsequently develop symptoms of PTSD. If the patient were to experience signs and symptoms aligned with what others who have gone through psychological trauma would develop, would the "adversity" constitute psychological trauma?.

The authors' stance is that while the subjective experience is indicative of how distressing an adversity is and the adoption of trauma-based principles in the clinical management can lead to favorable outcomes, it is not appropriate to define psychological trauma based on the emotional response. The presence of PTSD symptoms can be included in the formulation to guide treatment, but diagnosing PTSD could lead to unwelcome notions of externalizing fault or blame, or even highly-contentious compensation lawsuits. Rather, an objective evaluation of the adversity in question should be used to define whether it constitutes psychological trauma.

The authors would like to propose two main features for consideration; these are believed to have a role in refining the definition of what constitutes a traumatic event. These features would refer to the imminence of a threat, as well as a perceived loss of control in the person experiencing it.

The "Fight or flight response" was coined to describe an organism's response to threat [36], and at its conception was determined to be applicable to both physical and psychological emergencies. This is a process mediated by epinephrine, a hormone from the adrenal glands, which also plays a significant role in the mediation of PTSD symptoms such as hyperarousal and hypervigilance. It is worthwhile noting that epinephrine has a plasma half-life of between 2 to 3 minutes, which perhaps informs that the fight or flight response was never intended to constitute a protracted state of tension. In the context of the evolutionary perspective as the caveman encounters a tiger, a surge of epinephrine would only afford a critical moment to escape a grisly fate. Hence, the traumatic event is required to pose a risk of severe injury or death – not hours to days or even years later, but in the immediate here and now. Any adversity posing a threat beyond a time frame of the body's fight-or-flight response might still be distressing, but should not constitute psychological trauma.

Criterion A2 in DSM-IV required a response to the traumatic event which involved "Intense fear, helplessness or horror". These three emotions are all capable of existing independently, in the absence of a traumatic event. The child owning up after having broken a vase (fear), the sole breadwinner being retrenched yet unable to find another job (helplessness) and an avid reader immersed in a well-written thriller novel with supernatural elements (horror) all constitute scenarios that do not appear to qualify as psychological trauma.

Horror and fear might exist along the same spectrum as being scared, with horror understood as an extreme form of fear. Numbing of one's emotions at the specific point in time of the psychological trauma is a well-described mechanism of coping, which might not allow an individual to experience horror and/or fear at that material time.

However, helplessness exists at a cognitive level beyond the emotions to be numbed. An extensive consideration of viable actions available at one's disposal is necessary, akin to a chess player studying the board for possibilities, before reaching the invariable conclusion that one is unable to act effectively or defend oneself. This perhaps is best aligned with the etymological understanding of trauma, which has pierced through one's defense. Any event which has overwhelmed a person to such an extent as to qualify as psychological trauma should necessarily evoke loss of control, with a sense of futility. This is evidenced in most of the existing defined scenarios of psychological trauma - victims of natural disasters, sexual violence, serious accidents, robbery or war.

It is also worthwhile examining whether the loss of control needs to be objectively present, or can be operative as a subjective perception. The retrenched worker might actually be able to get a lower-paying job, but the shame from having to take on such a role could forbid the worker from entertaining this possibility. Likewise, the chess player might have overlooked the possibility to turn a losing scenario around through sacrificing pieces in a gambit. The alternative is known (but disregarded) in the former case, but not the latter. Both however equally qualify as leading an individual to experience loss of control, and the authors' opinion is that the perceived loss of control is the core requirement.

Should Criterion A be maintained as it is, an alternative perspective is raised – could the problem lie with the PTSD symptomatology, as defined by Criterion B to Criterion E , in being unable to discern between adversities which fulfil Criterion A and those which do not?. This paper does not profess to be able to pose this question, but more studies of phenomenology could help to shed light. After all, the newly-included symptom cluster in DSM-5 pertaining to negative alterations to mood and cognitions was developed more than four decades following the

introduction of PTSD into DSM-III.

Conclusion

The notion of psychological trauma has come a long way, from etymology and centuries of insights to the present-day Criterion A within DSM, and continues to remain a work in progress. This case series with PTSD symptoms in the absence of adversity fulfilling Criterion A provokes consideration about how psychological trauma ought to be conceptualized. The imminence of a threat and the perceived loss of control in response are two factors which the authors propose for consideration in refining the definition of psychological trauma.

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