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Post-Traumatic stress disorder (PTSD):

An essay on its epidemiology, etiology, clinical manifestations, diagnoses frameworks and as experienced by Health Care Workers in China and the US respectively during the COVID-19 pandemic.

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Introduction:

By definition, post-traumatic stress disorder (PTSD) is a psychiatric illness that can affect persons who have been exposed to a traumatic incident or who have been threatened with death, sexual violence, or major harm. This paper discusses the etiology, epidemiology, clinical manifestations, and diagnostic frameworks of PTSD, as well as the prevalence of post-traumatic stress disorder among health-care workers in the People's Republic of China (PRC) and the United States of America (USA) during the COVID-19 pandemic. The studies included in this essay demonstrate the significant frequency of posttraumatic stress symptoms (PTSS) and PTSD, particularly among healthcare workers who worked in COVID-19 wards, as well as some recommended coping strategies from the World Health Organization.

Body:

Epidemiology and Etiology of Posttraumatic stress disorder:

Combat veterans, first responders, victims of childhood and domestic abuse, and others who have experienced horrific events ranging from terror attacks to terrible accidents are all affected by post-traumatic stress disorder (PTSD). PTSD has been referred to as "shell shock" during World War I and "battle exhaustion" following World War II, but it can affect anyone of any ethnicity, nationality, or culture at any age. According to the National Center for PTSD, around 10% of women and 4% of men develop PTSD at some point in their life. Females are twice as likely as males to have a post-traumatic disorder, according to numerous studies.

According to new research, healthcare workers and first responders are just as likely as combat veterans to acquire posttraumatic stress disorder (PTSD) and posttraumatic stress symptoms (PTSS). The COVID-19 pandemic, also known as the coronavirus pandemic, is a global coronavirus disease 2019 (COVID-19) pandemic that is now ongoing and is caused by severe acute respiratory syndrome (SARS-CoV-2). The virus was initially discovered in Wuhan, China, in December 2019. Researchers identified a higher level of psychological distress, anxiety, somatization, obsessive-compulsive, phobic anxiety, and psychoticism in the study's 1704 Chinese health professionals than in the control group. The study conducted in Wuhan; China revealed that PTSD symptoms occurred among 31.6% of health care providers. During the initial phase of the COVID-19 outbreak, more than half of the respondents were psychologically affected as moderate-to-severe.

In the US, The Journal of General Internal Medicine study published in December surveyed more than 500 doctors, nurses and first responders. It was found that 74% of respondents reported symptoms of depression; 37% reported symptoms of post-traumatic stress disorder; and 15% reported thoughts of suicide or self-harm almost two years after working in a temporary Covid intensive care unit at the hospital of the University of Pennsylvania.

Classification of Post-traumatic stress disorder (PTSD)

Specifically, three PTSD subtypes are examined:

(1) complex PTSD, (2) externalizing/internalizing PTSD, and (3) dissociative/non-dissociative PTSD.

1. Complex PTSD may be diagnosed in adults or children who have repeatedly experienced traumatic events, such as violence, neglect, or abuse. It is thought to be more severe if: the traumatic events happened early in life or if the trauma was caused by a parent or carer.

2. The Externalization of Trauma: This is where individuals who are "symptomatic" of post-traumatic stress disorder (PTSD) may seem sick, crazy, or irrational. They might appear dissociative, clinically depressed, anxious, highly reactive, or rageful (or all of the above). According to the American Psychiatric Association, (2013: 13), externalizing disorders are those characterized by impulsive, disruptive conduct, substance use, and other addictive symptoms.

3. Internalization of PTSD is characterized by anxiety, depressive, and somatic symptoms.

4. Clinically, the dissociative subtype of PTSD is associated with high PTSD severity, predominance of derealization and depersonalization symptoms. Furthermore, PTSD patients with dissociative symptoms exhibit psychophysiological and neural responses to the recall of traumatic memories. However individuals with non-dissociative PTSD exhibit an increased heart rate, decreased activation of prefrontal regions, and increased activation of the amygdala in response to traumatic reminders.

Secondary Traumatic Stress Disorder:

Secondary trauma or second-hand trauma can occur if you are repeatedly exposed to particularly distressing details of a trauma experienced by others. Secondary traumatic stress (STS) disorder refers to experiencing a trauma response even though you didn't experience the trauma directly yourself. STS can occur after only one exposure to the details of another's trauma or after repeated exposures. Those who experience STS will have at least some of the symptoms that are commonly associated with post-traumatic stress disorder (PTSD). A small proportion of these individuals will experience full-blown PTSD as a result of secondary trauma exposure. Those who work in helping professions (e.g., social workers, professional counsellors, first responders, and police officers) and the loved ones of trauma survivors are at a greater risk of experiencing secondary trauma or secondary trauma stress.

Clinical Manifestations of Post-Traumatic Stress Disorder:

Symptoms of post-traumatic stress disorder can occur as soon as one month after a stressful experience, but they can also take years to appear. These symptoms generate major issues in social and work circumstances, as well as in relationships. They might also make it difficult for a person to go about their regular routine. The severity of PTSD symptoms might change over time. You might, for example, hear a car backfire and revisit combat memories. Alternatively, you can witness a news broadcast about a sexual attack and be struck by recollections of your own assault.

Symptoms can change over time or from one person to the next. Furthermore, according to the American Psychiatric Association, people with PTSD are more likely (80%) to develop other disorders than people without PTSD. Overall, anxiety, depression, and substance abuse are the most common disorders that occur as comorbidities of PTSD.

PTSD symptoms are generally grouped into four types: intrusive memories, avoidance, negative changes in thinking and mood, and changes in physical and emotional reactions.

1.Intrusive memories

- Recurrent, unwanted distressing memories of the traumatic event
- Intrusive thoughts such as repeated, involuntary memories; distressing dreams; or flashbacks of the traumatic event. Flashbacks may be so vivid that people feel they are re-living the traumatic experience or seeing it before their eyes.
- Severe emotional distress or physical reactions to something that reminds you of the traumatic event

2.Avoidance

- Trying to avoid thinking or talking about the traumatic event
- Avoiding reminders of the traumatic event may include avoiding people, places, activities, objects, and situations that may trigger distressing memories.

3.Negative changes in thinking and mood

- Negative thoughts about yourself, other people, or the world
- Hopelessness about the future
- Memory problems, including not remembering important aspects of the traumatic event
- Negative thoughts and feelings leading to ongoing and distorted beliefs about oneself or others (e.g., “I am bad,” “No one can be trusted”); distorted thoughts about the cause or consequences of the event leading to wrongly blaming self or other; ongoing fear, horror, anger, guilt or shame; much less interest in activities previously enjoyed; feeling detached or estranged from others; or being unable to experience positive emotions (a void of happiness or satisfaction).
- Difficulty maintaining close relationships (Feeling detached from family and friends)
- Difficulty experiencing positive emotions
- Feeling emotionally numb

4.Changes in physical and emotional reactions (also called arousal symptoms)

- Being easily startled or frightened
- Reactive symptoms may include being irritable and having angry outbursts; behaving recklessly or in a self-destructive way; being overly watchful of one's surroundings in a suspecting way; being easily startled; or having problems concentrating or sleeping.
- Always being on guard for danger
- Self-destructive behaviour, such as drinking too much or driving too fast
- Trouble sleeping
- Trouble concentrating
- Irritability, angry outbursts or aggressive behaviour
- Overwhelming guilt or shame

Diagnosis of PTSD:

A traumatic incident must be experienced in order to be diagnosed with PTSD. However, rather than being first-hand, the exposure could be indirect. For example, someone who learns about the brutal death of a close relative or friend may get PTSD. It can also happen as a result of recurrent exposure to gruesome details of trauma, such as police personnel who are exposed to child abuse cases.

DSM-5 Criteria for PTSD

In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, the American Psychiatric Association amended the PTSD diagnostic criteria in 2013. (DSM-5). Trauma- and Stressor-Related Disorders, a new category in DSM-5, includes PTSD. As a diagnostic criterion, all of the conditions in this categorization require exposure to a traumatic or stressful incident. For a PTSD diagnosis, all of the criteria must be met.

The following text summarizes the diagnostic criteria:

Criterion A: stressor (one required)

The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s):

- Direct exposure
- Witnessing the trauma
- Learning that a relative or close friend was exposed to a trauma
- Indirect exposure to aversive details of the trauma, usually in the course of professional duties (e.g., first responders, medics)

Criterion B: intrusion symptoms (one required)

The traumatic event is persistently re-experienced in the following way(s):

- Unwanted upsetting memories
- Nightmares
- Flashbacks
- Emotional distress after exposure to traumatic reminders
- Physical reactivity after exposure to traumatic reminders

Criterion C: avoidance (one required)

Avoidance of trauma-related stimuli after the trauma, in the following way(s):

- Trauma-related thoughts or feelings
- Trauma-related external reminders

Criterion D: negative alterations in cognitions and mood (two required)

Negative thoughts or feelings that began or worsened after the trauma, in the following way(s):

- Inability to recall key features of the trauma
- Overly negative thoughts and assumptions about oneself or the world
- Exaggerated blame of self or others for causing the trauma
- Negative affect
- Decreased interest in activities
- Feeling isolated
- Difficulty experiencing positive affect

Criterion E: alterations in arousal and reactivity

Trauma-related arousal and reactivity that began or worsened after the trauma, in the following way(s):

- Irritability or aggression
- Risky or destructive behavior
- Hypervigilance
- Heightened startle reaction
- Difficulty concentrating
- Difficulty sleeping

Criterion F: duration (required)

Symptoms last for more than 1 month.

Criterion G: functional significance (required)

Symptoms create distress or functional impairment (e.g., social, occupational).

Criterion H: exclusion (required)

Symptoms are not due to medication, substance use, or other illness.

Two specifications:

- **Dissociative Specification:** In addition to meeting criteria for diagnosis, an individual experiences high levels of either of the following in reaction to trauma-related stimuli:
  - **Depersonalization.** Experience of being an outside observer of or detached from oneself (e.g., feeling as if "this is not happening to me" or one were in a dream).
  - **Derealization.** Experience of unreality, distance, or distortion (e.g., "things are not real").
- **Delayed Specification.** Full diagnostic criteria are not met until at least six months after the trauma(s), although onset of symptoms may occur immediately.

PTSD Checklist 5 (PCL-5)

The PCL-5 is a 20 item self-report measure of the 20 DSM-5 symptoms of Post Traumatic Stress Disorder (PTSD). Included in the scale are four domains consistent with the four criterion of PTSD in DSM-5:

- Re-experiencing (criterion B)
- Avoidance (criterion C)
- Negative alterations in cognition and mood (criterion D)
- Hyper-arousal (criterion E)

The PCL-5 can be used to monitor symptom change, to screen for PTSD, or to make a provisional PTSD diagnosis.

Scoring and Interpretation

Scores consist of a total symptom severity score (from 0 to 80) and scores for four subscales:

- Re-experiencing (items 1-5 – max score = 20)
- Avoidance (items 6-7 – max score = 8)
- Negative alterations in cognition and mood (items 8-14 – max score = 28)
- Hyper-arousal (items 15-20 – max score = 24)

In addition to a raw score being presented, a "mean score" is also computed, which is the subscale score divided by the number of items. These scores range between 0 to 5, where higher scores represent higher severity.

Consistent with the likert scale:

0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely

There are two methods for determining a provisional PTSD diagnosis.

1. A cut-off raw score is 38 for a provisional diagnosis of PTSD. This cut-off has high sensitivity (.78) and specificity (.98) (Cohen et al., 2015).
2. Examine items rated as 2="Moderately" or higher as an endorsed symptom, then following the DSM-5 diagnostic rule which requires at least: 1 B item (questions 1-5), 1 C item (questions 6-7), 2 D items (questions 8-14), 2 E items (questions 15-20).

If the scale is used to track symptoms over time, a minimum 10 point change represents clinically significant change (as based on the PCL for DSM-IV change scores)

PTSD experienced by Health Care Workers during the COVID-19 Pandemic:

SARS, MERS, Ebola, and COVID-19 are just a few examples of pandemics that have had a psychological impact on humans over time. Separation from loved ones, loss of independence, ambiguity about the state of the sickness, and anxiety all have detrimental psychological effects on human well-being. Suicide, mental illness, addiction, and self-harm are all possibilities as a result of this.

A new coronavirus, COVID-19, has been circulating among healthcare professionals since December 2019. This virus spread quickly, resulting in death and contagion, as well as a significant psychological impact on the population. The pandemic influenced interpersonal connections, work, and mental health through altering daily life, cognition, and behavior. COVID-19's psychological impacts were felt all around the world, but research has revealed that healthcare professionals (HPs) are the most vulnerable to acquiring PTSD and PTSS.

The main risks factors for HPs in developing PTSD and correlated symptoms during the COVID-19 pandemic have been summarized:

(a) ***COVID-19 exposure:*** HPs who work in the COVID-19 ward have high responsibilities and are more likely to be infected. They live a constant fear of contagion and fear to transmit the infection to their families. In most cases, HPs accompany dying patients alone due to preventive measures, living vicarious traumatic experiences.

(b) ***Epidemiology:*** The rate of virus incidence influences the level of anxiety and depression among HPs. Furthermore, the trend of the growth case numbers is proportional to the intensity of work in COVID-19 wards. When HP's overwork, they feel less confident in their capacity to manage stress and support patients.

(c) ***Public health policies:*** The lack of data transparency from the government on the number of infections and the ambiguity of prevention and treatment plans in hospitals influence the emotional distress and the feeling of loneliness and abandonment from the Institutions.

(d) ***Material resources:*** The shortage of resources, such as personal protection equipment, products to sanitize environments, place in which to rest after hours of work, increase the fear of contagion among HPs, as well as decrease the perceived support of the healthcare system.

(e) ***Human resources:*** The health emergency and the consequent lack of human resources led to greater intensity in working hours and increasing daily commitment. HPs suffer from emotional and physical stress that has become chronic, leading to psychological exhaustion.

(f) ***Personal factors:*** HPs who have children are more likely to experiment with the fear of infecting them. Also, people who have psychological issues and feelings of loneliness have less resilience in managing the stress and ineffective coping strategies. They could resort to self-medication, such as substance use, incrementing the risk of developing an addiction.

Prevalence and factors associated with Post-Traumatic Stress Disorder in healthcare workers exposed to COVID-19 in Wuhan, China: a survey

A web-based questionnaire was delivered between November and December 2020 as a link via communication application (WeChat) to Health Care Workers who worked at several COVID-19 units (including the emergency department, outpatient, fever clinic, intensive care unit, infection ward, isolation ward and mobile cabin hospital) in Wuhan, from the onset of the COVID-19 outbreak. This study was approved by the Ethics Committee of Conch Hospital of Anhui Medical University (approval number 20201025). All participants joined the survey voluntarily and provided written informed consent before answering the questionnaire. Data from the study was collected and analysed anonymously.

Method of Diagnosis:

The presence and severity of PTSD symptoms were measured by the post-traumatic stress disorder checklist-5 (PCL-5), containing 20 self-report items, with high reliability and validity. Individual's score of PCL-5 ranges from 0 to 80, and the cut-off point score for diagnosis PTSD was set as more than or equal to 33, with a higher score indicating more serious PTSD symptoms. The questionnaire contained five dimensions: adaptation, partnership, growth, affection and resolve. Quality of life was measured with the Chinese QOL questionnaire, with a total of 6 items, assessing the physical health, mental health, economic status, work or study status, family relationship and non-family peers' relationship, respectively.

The answers are divided into 5 levels (1 = very poor, 2 = poor, 3 = fair, 4 = good, and 5 = very good).

Results of the survey:

A total of 659 participants were included in the final analysis. Among the participants, 573 (86.9%) were nurses, 55 (8.3%) were doctors, and 31 (4.7%) were non-clinical Health Care Workers (HCW's). Females accounted for 90.6% (597) of the participants. Most of the HCWs engaged in fighting COVID-19, 223 (33.8%) were aged between 31 to 40 years, and 316 (48%) were younger than 30 years. The majority of participants in this survey had a bachelor's degree (509,77.2%) and had a primary (377, 57.2%) to middle (221, 33.5%) job title. 425 (64.5%) participants were married, while 234 (35.5%) were unmarried/divorced/widowed.

In this survey, there were 90 (13.7%) Health Care Worker's with a PCL-5 score ≥ 33 and were then considered as suffering from PTSD. Compared with those participants without PTSD, the incidence rate of suffering from chronic diseases (22.2% vs. 10.4%), occupational exposure without protection (20% vs. 10.7%), relatives or close friends died of COVID-19 (35.6% vs. 21.3%), experience of social isolation (40% vs. 19.5%), and dissatisfaction with job (35.6% vs. 13.9%) were higher in Health Care Worker's (HCWs) with PTSD. HCWs working in the so-called mobile cabin hospitals (basic hospitals setup in gymnasiums and conference centres in March 2020, mostly used to treat patients with COVID-19 who had mild symptoms) had the lowest rate of PTSD (10.2%).

Impact of PTSD on participants:

Compared with non-PTSD HCWs, PTSD participants reported a higher score of panic, shorter sleeping time, poorer quality of life, and more frequent feelings of loneliness. Moreover, 61.1% of HCWs with PTSD intended to resign from their current job, compared to 32% in those without PTSD. Only a small proportion (39, 6.9%) of participants without PTSD thought they needed to seek psychological assistance, while 44.4% of the participants with PTSD were planning to consult with a psychologist.

Healthcare worker trauma and related mental health outcomes during the COVID-19 outbreak in New York City (The United States of America): A cross sectional survey

Description and Objectives of the Study:

A psychological trauma framework was used to characterize the mental health burden for clinical and non-clinical healthcare worker occupations during the COVID-19 pandemic. The objective was to measure and characterize risk factors for trauma and anxiety-related mental health problems among HCWs at a public hospital in the epicentre of the COVID-19 pandemic in New York City (NYC). This study reports findings from a cross-sectional survey of NYC HCWs shortly after the initial 2020 infection surge. Over 800 hospital employees completed the survey that assessed professional quality of life indicators (compassion satisfaction [CS], burnout [BO], secondary traumatic stress [STS]) and PTSD symptoms.

Methods of Diagnosis:

After obtaining Institutional Review Board approval, (NYC Health and Hospitals, IRB #20–017), a cross-sectional anonymous web-based survey of HCWs at a Level 1 Trauma Care Centre located in the Bronx, NYC borough was conducted. The survey was administered in July 2020, four months after the city's March COVID-19 surge. Overall, 1,113 (27%) initiated the online survey, and 889 (22% of the hospital staff) were included in the analytic population.

The survey included demographic questions such as age, sex (male, female or other), race, ethnicity, and education level. Occupation-related questions, length of time in career, and health characteristics were also included in the survey.

Outcomes of interest for the survey were symptoms of post-traumatic stress disorder (PTSD), burnout (BO) and secondary traumatic stress (STS). The Primary Care-PTSD 5 screener was used to assess past month PTSD symptoms. The PTSD 5 is a validated five-item measure used to detect probable disorder based on the Diagnostic Statistical Manual of Mental Disorders (DSM-5) criteria. Respondents endorse a "yes" or "no" response to five questions with one point for each "yes" response. A cut-point score of "3" was used to detect probable PTSD.

To assess trauma response the Professional Quality of Life scale (ProQoL) was used. The ProQoL contains three subscales of Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS), each with ten statements from the total 30 statement scale. Compassion Satisfaction (CS) is generally defined as the pleasure one derives from being able to do one's work well (protective factor). Burn Out (BO) refers to feelings of hopelessness and difficulties in dealing with work due to being fatigued by stress. Higher scores on the ProQoL indicate higher CS, BO, or STS.

Results of the survey:

The majority of the survey population identified as female (71%). Non-clinical personnel represented 33%, clinical staff represented 51%, and allied health professionals represented 16% of the survey population. Seventy percent had a bachelor or graduate degree and 30% had 20 years or more job experience.

Almost half (46%) reported that their work-role changed as a result of the pandemic and 47% indicated they provided clinical care to COVID-19 patients who died. Furthermore, almost a quarter (22%) reported testing positive for COVID-19. 13% of respondents screened positive for Probable PTSD, 45% reported moderate or high STS and 25% reported moderate burnout. 91% did not have a behavioural or emotional health concern before the pandemic.

Results from the STS model showed that HCWs with probable PTSD and moderate burnout all had significantly higher odds of reporting moderate/high STS.

Variable	Probable PTSD[a] *aOR* (95% CI)	Moderate/High STS[b] *aOR* (95% CI)	Moderate BO[c] *aOR* (95% CI)	High CS[d] *aOR* (95% CI)
Sex[e]				
Male	ref	ref	ref	Ref
Female	**2.14 (1.10–4.15)**	1.20 (0.81–1.77)	1.00 (0.62–1.61)	1.02 (0.69–1.48)
Other[f]	4.19 (0.86–20.32)	1.03 (0.28–3.75)	0.57 (0.12–2.78)	0.86 (0.24–2.98)
Age[e]				
<35 years	ref	ref	ref	ref
35–44 years	1.22 (0.59–2.48)	0.91 (0.56–1.47)	0.86 (0.50–1.48)	1.30 (0.81–2.10)
45–54 years	2.13 (1.02–4.44)	1.04 (0.63–1.71)	**0.38 (0.21–0.69)**	1.51 (0.93–2.46)
55–64 years	0.93 (0.41–2.10)	1.16 (0.70–1.94)	0.55 (0.30–1.01)	1.63 (0.98–2.70)
65+ years	0.33 (0.04–3.04)	1.03 (0.63–1.71)	0.33 (0.10–1.04)	2.78 (1.22–6.33)
Race[e]				
White	ref	ref	ref	ref
Asian	1.35 (0.60–3.06)	1.74 (1.03–2.94)	0.67 (0.36–1.29)	0.99 (0.59–1.66)
Black	2.05 (0.97–4.31)	1.30 (0.79–2.14)	0.47 (0.26–0.83)	1.41 (0.87–2.27)
Multiple/Other	1.06 (0.45–2.50)	1.40 (0.82–2.38)	0.63 (0.33–1.19)	1.50 (0.90–2.52)
COVID patient died				
No	ref	ref	ref	ref
Yes	0.91 (0.50–1.65)	1.38 (0.92–2.09)	1.49 (0.89–2.48)	**1.63 (1.09–2.44)**
Prior BH/EH concern[e]				
No	ref	ref	ref	ref
Yes	**2.01 (1.00–4.04)**	1.16 (0.62–2.16)	**2.48 (1.28–4.81)**	1.15 (0.62–2.13)
Coronavirus Obsession				
No Coronavirus Obsession	ref	ref	ref	ref
Probable Coronavirus Obsession	**3.93 (2.35–6.56)**	**3.84 (2.44–6.03)**	1.56 (0.93–2.60)	1.44 (0.91–2.28)
PTSD				
No PTSD	N/A	ref	ref	ref
Probable PTSD	N/A	**6.72 (3.27–13.81)**	**3.88 (2.11–7.11)**	0.87 (0.49–1.57)
STS[e]				
Low	ref	N/A	ref	ref
Moderate or High	**6.58 (3.19–13.57)**	N/A	**4.12 (2.68–6.32)**	**0.67 (0.47–0.96)**
Burnout[e]				
Low	ref	ref	N/A	**ref**
Moderate	**4.03 (2.15–7.56)**	**3.92 (2.57–5.98)**	N/A	**0.11 (0.07–0.17)**
Compassion Satisfaction[e]				
Low or Moderate	1.17 (0.63–2.17)	**1.48 (1.03–2.13)**	**9.70 (6.18–15.22)**	N/A
High	ref	**ref**	ref	N/A

Note: PTSD: Post-Traumatic Stress Disorder; STS: Secondary Traumatic Stress; BO: Burnout; CS: Compassion Satisfaction; BH: Behavioral health; EH: Emotional Health. Each model included the same set of independent variables accounting for demographic characteristics (sex, age group, race, ethnicity), occupational characteristics (occupational group, years of experience), prior behavioral health or emotional health concerns, and COVID-19 variables (caring for a patient who died from COVID-19, having probable COVID-19 obsession). Bolded ORs and CI' represent significant variables. Ethnicity and occupational group were not significant in any of the models and are not show.

[a]No PTSD v. Probable PTSD.

[b]Moderate/High STS v. Low STS.

[c]Moderate BO v. Low STS.

[d]High CS v. Moderate CS.

[e]Variable has missing information.

[f]Other includes prefer not to answer and those who identify as transgender.

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Coping strategies recommended for Healthcare Professionals:

Managing stress and psychosocial well-being during or after a traumatic event is extremely important, together with taking care of physical health and practicing effective coping strategies. For example, A break during the work shift or between shifts, eating healthy food, exercising whenever possible, and keeping in touch with family and friends.

Ineffective coping strategies, such as substance use, and self-isolation should be categorically excluded. They can worsen mental and physical well-being by increasing stress. It may be helpful to practice strategies that have proven effective in managing stress.

The World Health Organization recommended the following guidelines to preserve Health Professionals from chronic stress during emergency:

- Regularly monitor the psychological well-being of the staff;
- Ensure good quality of communication and update accurate information;
- Evaluate the working times and the rest or break times that the staff needs;
- Give practitioners a space to express concerns and ask questions;
- Encourage mutual support among colleagues;
- Facilitate access to mental health services and Psychological First Aid, within the work context and outside.

Conclusion:

This essay has explored Post-traumatic stress disorder with an in-depth discussion on its epidemiology rooted in the experiences of combat veterans and the etiology showing that females are twice as likely to experience PTSD than males. The 3 subtypes of PTSD, namely complex, externalizing/internalizing, and dissociative/non-dissociative PTSD were also briefly explained. Furthermore, this essay explores the 4 types of PTSD clinical manifestations from intrusive memories to changes in physical and emotional reactions. The frameworks of diagnosis for PTSD have been established as the DSM-5 and the PCL-5. Lastly, this essay introduces 2 surveys, respectively on the prevalence and factors associated with PTSD in healthcare workers exposed to COVID-19 in Wuhan, China, and New York, USA. The WHO also recommends some coping strategies for Health Care workers. In conclusion, the research in this essay from various published articles explains why health care workers are more at risk for developing PTSD during the COVID-19 pandemic.

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PSYCHIATRY HOMEWORK QUESTIONS AND EXERCISES

(Please note each question begins on a new page)

PSYCHIATRY CLASS 1:

Discussion 1.1:

Please answer which kind of hallucination does the above-mentioned description each belong to? Please listen to the teacher's descriptions and write down and hand in your answers at the end of the semester together with the course paper.

E.g.1: In the absence of objective voice, patients heard a voice that ordered him to do something, such as "do not take medicine", "hit the window", "kill yourself".

Answer:

This patient experiences Auditory Hallucinations in the subtype of imperative auditory hallucinations. An imperative hallucination (also known as command hallucination) in this patient's case, is where the individual believes that they are being given specific instructions. These "commands" can range from the benign (a harmless action such as picking flowers) all the way to suicide or homicide. This can be seen when the voice gives the patient harmful and dangerous commands to not take his medicine, hit the window and kill himself.

E.g.2: A woman heard her boss talk about her that she didn't work hard and should be criticized. Although no others heard, she believes and often talked to the voice "what you said is not right, cut it out!"

Answer:

This patient is experiencing Auditory Hallucinations in the subtype of argumentative auditory hallucinations. The woman is talking to the voice and arguing with the voice over it thinking she did not work hard and should be criticised.

Discussion 1.2:

Please answer which is most likely delusion among the above mentioned four descriptions? And write down and hand in your answers at the end of the semester together with the course paper.

A test- Which is most likely delusion?

- Heliocentrism of Copernicus
- Cultists thought cultism can cure their physical diseases
- Worried about he had an incurable disease whereas actually he was biologically healthy
- Firmly believed several classmates ganged up against himself because they often smile when they saw him

Answer:

The definition of delusion is "a false unshakeable belief which is out of keeping with the patient's social and cultural background". The words "firmly believed", lead us to suggest that the patient has an unshakeable belief that his classmates are ganging up on him. Delusion is also defined as an idiosyncratic belief or impression maintained despite being contradicted by reality or rational argument. It is therefore irrational to believe that several classmates ganged up against him because they smile when they see him because a smile is a kind and friendly gesture.

Discussion 1.3:

Please answer **which kind of symptom of attention and concentration** does the above-mentioned description **each** belong to? Please listen to the teacher's descriptions and write down and hand in your answers at the end of the semester together with the course paper.

Exercise:

A. A patient is unduly careful with what others do to avoid being persecuted
B. A patient with OCD always pays attention on his obsessive ideas such as 'why does the sun rise and set in the west?'
C. A patient with mania easily transferred from focusing on one phenomenon to the other
D. A patient with depression found it's hard to concentrate on the class even though in a purposeful way
E. A hypnotized patient could only hear what the hypnotist said and couldn't perceive others

Answers:

A. Hyperprosexia
B. Fixation of Attention
C. Transference of Attention
D. Divergence of Attention
E. Narrowing of Attention

Exercises:

1. Please describe the three phases of the initial interview of psychiatry
2. Please illustrate and tell the difference between “Elation” and “Euphoria”
3. What is Korsakoff’s syndrome?

Answers:

1. Opening Phase generally requires 5-10 minutes, whereby the psychiatrist observes and listens to the patient. The Body of the Interview usually lasts 30-40 minutes and during this time, the psychiatrist makes inquiries, classifies, and practices empathy. The last is the Closing Phase and this makes up 5-10 minutes, where the psychiatrist summarizes and controls, discusses the patients assessment and makes an effort to come to a negotiated agreement about treatment or follow up plans regarding the patient.

2. Elation is where emotional activity is increased, the person shows undue happiness and feeling great, which do not match with the environment (mania, hypomania). It is a state of heightened joy, exaggerated optimism, and restless excitement. Euphoria is elation and feelings of increased spiritual, intellectual, or physical power, and a type which results from disinhibition in organic states and dementia. A euphoric mood is characterized by feelings of strong happiness, excitement, and well-being.

   The difference between the two is that is euphoria is an excited state of joy, a good feeling, a state of intense happiness, a state of intense happiness and self-confidence. On the contrary, elation is an exhilarating psychological state of pride and optimism. An exhilarating psychological state of pride and optimism; an absence of depression

3. Korsakoff's syndrome is a disorder that primarily affects the memory system in the brain. It usually results from a deficiency of thiamine (vitamin B1), which may be caused by alcohol abuse, dietary deficiencies, prolonged vomiting, eating disorders, or the effects of chemotherapy. Most patients first develop a delirium, marked by confabulation, gait disorder and problems with memory and disorientation (that is usually called a Wernicke's encephalopathy). When this delirium clears, a profound disorder of memory remains. Patients have great difficulty learning and retaining new information as well as problems recalling memories from the recent past.

PSYCHIATRY CLASS 2:

Exercise: (After Class Assignment)

1. What are the clinical manifestations of schizophrenia?

Positive and Negative Syndrome Scale (PANSS)

Positive Scale:	General Psychopathology Scale:
– Delusions – Conceptual disorganization – Hallucinations – Hyperactivity – Grandiosity – Suspiciousness/persecution – Hostility	– Somatic concern – Anxiety – Guilt feelings – Tension – Mannerisms and posturing – Depression – Motor retardation – Uncooperativeness – Unusual thought content – Disorientation – Poor attention – Lack of judgement and insight – Disturbance of volition – Poor impulse control – Preoccupation – Active social avoidance
Negative Scale:	
– Blunted affect – Emotional withdrawal – Poor rapport – Positive/apathetic social withdrawal – Difficulty in abstract thinking – Lack of spontaneity and flow of conversation – Stereotypical thinking	

(Kay SR, 1987, The Positive and Negative Syndrome Scale (PANSS) for Schizophrenia)

Disorders of thought and perception:	Disorders of emotion:	Disorders of volition (abulia)	Other clinical manifestations
– Delusions – Hallucinations – Schneiderian first-rank symptoms – Disorders of the form and flow of thought – Insight – Impaired cognition	– Emotional blunting – Apathy – Excitation and depression	Disjointed volition and weakened volition	– Loosening of associations – Neologisms-new words invented by the patient – Impoverishment of thinking – Insight

2. Please introduce the subtypes of schizophrenia

The Classification of Schizophrenia:

- Paranoid type: predominantly positive symptoms of schizophrenia, including delusions and hallucinations
- Disorganized type: characterized by disorganized behavior, speech and includes disturbance in emotional expression
- Catatonic type: characterized by striking motor behavior
- Residual type: diagnosed by at least one past episode, existing negative symptoms, and no positive symptoms.
- Simple schizophrenia: the onset of prominent negative symptoms and the lack of delusions, hallucinations, and thought disorder
- Undifferentiated type: the person exhibits symptoms of more than one subtype of schizophrenia

3. What are the differential diagnoses of schizophrenia?

The Differential Diagnosis for Schizophrenia according to The revised fifth edition of DSM (DSM-V) 2013:

- Major depressive or bipolar disorder with psychotic or catatonic features
- Schizoaffective disorder
- Schizophreniform disorder and brief psychotic disorder
- Delusional disorder
- Schizotypal personality disorder
- Obsessive-compulsive disorder and body dysmorphic disorder
- Post-traumatic stress disorder
- Autism spectrum disorder or communication disorders
- Other mental disorders associated with a psychotic episode

PSYCHIATRY CLASS 3:

Discussion 3.1:

1.How to differentiate “depressive dementia” and “senile dementia or Alzheimer disease”?

Pseudodementia is a condition that appears similar to dementia but does not have a foundation in neurological degeneration. Many refer to the condition as depressive pseudodementia because the symptoms often stem from mood-related conditions such as depression. Depressive dementia is also referred to as partial dementia because not all cognitive function is damaged, the only affected areas during depressive dementia are thinking, attention and memory. While in senile dementia there usually is an almost complete deficit in the patient’s cognitive function.

Furthermore, Alzheimer's disease is a progressive disease whereby brain cell connections and the cells themselves degenerate and die, eventually destroying memory and other important mental functions. The main difference between dementia and Alzheimer’s is that Alzheimer’s disease is a specific form of dementia. Dementia is a general term for a decline in cognitive abilities that include memory loss and thinking difficulties. Alzheimer’s is a disease that causes dementia. Alzheimer’s is only one of many types of dementia — each with their own cause.

Exercise: (After class assignment)

1. What’re the clinical manifestations of BP?

Answer:

Bipolar I disorder is diagnosed when at least one manic episode is identified. Bipolar II disorder requires the absence of even one manic episode, and instead the occurrence of at least one hypomanic episode and at least one major depressive episode.

The clinical manifestations of BD:

- Manic episode: A manic episode is a period of abnormally elevated, extreme changes in mood, behaviour and activity and energy level. Severe dysfunction, Need hospitalisation!
- Hypomanic episode: Hypomania is a milder version of mania that lasts for a short period, usually a few days. Mild and moderate dysfunction.
- Major depressive episode: A Chronic Illness
- Mixed state of BD: symptoms of mania and depression that occur at the same time or in rapid sequence without recovery in between
- Rapid Cycling (RC): a pattern of frequent, distinct episodes in bipolar disorder

2. What're the differential diagnoses of BP I disorder?

Answer:

According to the revised fifth edition of DSM (DSM-V), 2013)

- Major depressive disorder
- Other bipolar disorders
- Generalized anxiety disorder, panic disorder, posttraumatic stress disorder, or other
- Substance/medication-induced bipolar disorder
- Attention-deficit/hyperactivity disorder
- Personality disorders
- Disorders with prominent irritability

3. Please introduce the treatment of BP.

The types and doses of medications prescribed are based on particular symptoms. Bipolar I and II, medications may include:

- **Mood stabilizers** to control episodes of mania or hypomania, which is a less severe form of mania. Examples of mood stabilizers include lithium (Lithobid), valproic acid (Depakene), divalproex sodium (Depakote), carbamazepine (Tegretol, Equetro, others) and lamotrigine (Lamictal).
- **Antipsychotics** such as olanzapine (Zyprexa), risperidone (Risperdal), quetiapine (Seroquel), aripiprazole (Abilify), ziprasidone (Geodon), lurasidone (Latuda), cariprazine (Vraylar) or asenapine (Saphris). They may be prescribed alone or along with a mood stabilizer.
- **Antidepressants:** An antidepressant can sometimes trigger a manic episode, therefore it needs to be prescribed along with a mood stabilizer or antipsychotic
- **Antidepressant-antipsychotic.** Symbyax combines the antidepressant fluoxetine and the antipsychotic olanzapine. It works as a depression treatment and a mood stabilizer. Symbyax is approved by the Food and Drug Administration specifically for the treatment of depressive episodes associated with bipolar I disorder.

In addition to medication for bipolar disorder, other treatment approaches include:

- **Psychotherapy.** Cognitive behavioral therapy is used to identify unhealthy, negative beliefs and behaviors and replace them with healthy, positive ones. Other types of therapy also may help, such as social rhythm therapy — establishing a consistent routine for better mood management.
- **Substance abuse treatment.** Many people with bipolar disorder also have alcohol, tobacco or drug problems. Drugs or alcohol may seem to ease symptoms, but they can trigger, prolong or worsen depression or mania.
- **Treatment programs.** Participation in an outpatient treatment program for bipolar disorder can be very beneficial.
- **Self-management strategies.** This includes living a healthy lifestyle, such as getting enough sleep, eating a healthy diet and being physically active. Keeping to a regular schedule, getting involved in social activities and joining a support group may also help.

PSYCHIATRY CLASS 4:

Exercise: After Class Assignment

1. What are the clinical manifestations of panic disorder?

Answer:

A Panic attack is a recurring, unpredictable, intense horror experience with personality disintegration and autonomic nervous symptoms that may last 5~20 minutes. Other signs and symptoms of panic attacks include the following:

- Anticipatory anxiety
- Avoidance behaviour (*with agoraphobia, without agoraphobia)*
- Chest pain.
- Chills
- Choking or smothering sensation.
- Difficulty breathing.
- Fear of losing control.
- Feeling like you're going to die.
- Intense feeling of terror.
- Nausea.
- Racing heart.
- Sweating.
- Tingling or numbness in fingers or toes.
- Trembling or shaking.

2. What are the differential diagnoses of OCD?

Answer:

- Anxiety disorder
- Major depressive disorder
- Other obsessive-compulsive and related disorders
- Tics (in tic disorder) and stereotyped movements
- Psychotic disorders
- hypochondriasis
- Other compulsive-like behaviour
- Obsessive-compulsive personality disorder

3. What are the differential diagnoses of social phobia?

Answer:

The differential diagnosis of social phobia according to the revised fifth edition of DSM (DSM-V), 2013

- Normative shyness
- Agoraphobia
- Panic disorder
- Generalized anxiety disorder
- Separation anxiety disorder
- Specific phobia
- Major depressive disorder
- Body dysmorphic disorder
- Autism spectrum disorder
- Personality disorders
- Other mental disorders
- Other medical conditions
- Oppositional defiant disorder

Discussion 5.1:

How to differentiate "Autistic disorder" and "Asperger disorder"?

The principal difference between autism and Asperger's is that Asperger's features milder symptoms and no language delays. Most children who were previously diagnosed with Asperger's have good language skills but may have difficulty "fitting in" with their peers.

Children with autism are frequently viewed as aloof and uninterested in others. This is not the case with Asperger's Disorder. Individuals with Asperger's Disorder usually want to fit in and have interaction with others, but often they don't know how to do it. They may be socially awkward, not understand conventional social rules or show a lack of empathy.

One of the major differences between Asperger's Disorder and autism is that, by definition, there is no speech delay in Asperger's. In fact, children with Asperger's Disorder frequently have good language skills; they simply use language in different ways. Speech patterns may be unusual, lack inflection or have a rhythmic nature, or may be formal, but too loud or high-pitched. Children with Asperger's Disorder may not understand the subtleties of language, such as irony and humour, or they may not understand the natural flow of a conversation.

Another distinction between Asperger's Disorder and autism concerns cognitive ability. While some individuals with autism have intellectual disabilities, most persons with Asperger's Disorder possess average to above-average intelligence.

While motor difficulties are not a specific criterion for Asperger's, children with Asperger's Disorder frequently have motor skill delays and may appear clumsy or awkward.

Children with Asperger's do not have delays in the area of communication and language. In fact, to be diagnosed with Asperger's, a child must have normal language development as well as normal intelligence.

Exercise: (After class assignment)

1. What're the differential diagnoses of autistic disorder?

The differential diagnoses of autism spectrum disorder include:

- Rett syndrome
- Selective mutism
- Language disorders and social (pragmatic) communication disorder
- Intellectual disability (intellectual developmental disorder) without autism spectrum disorder
- Stereotypic movement disorder
- Attention-deficit/hyperactivity disorder
- Schizophrenia
- Individuals with a well-established DSM-IV diagnosis of autistic disorder should be given the diagnosis of autism spectrum disorder (The revised fifth edition of DSM (DSM-V), 2013)

2. What're the clinical manifestations of ADHD?

The clinical manifestations of ADHD include:

- Attention-deficit: difficulty sustaining attention, hyperactivity and impulsive behaviour
- Overactivity: can seem restless, may have trouble concentrating and may act on impulse.
- Attention-deficit: shows carelessness and is distracted often and easily
- Overactivity: shows poor self-control, impulsiveness and emotional lability
- Others: mental retardation is not common

3. Please introduce the treatment of ADHD.

ADHD can be treated using medicine or therapy, but a combination of both is often best.

There are 5 types of medicine licensed for the treatment of ADHD:

- methylphenidate
- lisdexamfetamine
- dexamfetamine
- atomoxetine
- guanfacine

Therapies that may be used, includes:

- Psychoeducation
- Behaviour therapy
- Parent training and education programmes
- Social skills training
- Cognitive behavioural therapy (CBT)
- Diet: eat a healthy, balanced diet

PSYCHIATRY CLASS 6:

Exercise: After class assignment

1. What're the clinical manifestations of delirium?

Answer

The clinical manifestations of delirium

- Develops quickly
- Fluctuating courses with lucid intervals
- Difficulty in orientation and attention
- Illusions or hallucinations, seeing things that don't exist
- Sleep disturbances or disturbed sleep habits
- Autonomic dysfunction are common
- Restlessness, agitation or combative behavior
- Calling out, moaning or making other sounds
- Being quiet and withdrawn — especially in older adults
- Slowed movement or lethargy
- Reversal of night-day sleep-wake cycle
- Consciousness impaired

2. What's the etiology of Alzheimer's disease?

Answer:

- Biologic causes (e.g., age, genetic factors, the cholinergic hypothesis, neuropathology)
- Other factors (environmental, physiological, cerebral dysfunction)
- Scientists believe that for most people, Alzheimer's disease is caused by a combination of genetic, lifestyle and environmental factors
- Biologic causes (the cholinergic hypothesis)
    - Decreased activity of acetylcholine
    - Reduction of choline acetyltransferase
- Biologic causes (neuropathology)
    - Alzheimer's disease is thought to be caused by the abnormal build-up of proteins in and around brain cells.
    - One of the proteins involved is called amyloid, deposits of which form plaques around brain cells. The other protein is called tau, deposits of which form tangles within brain cells.

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