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# The Emotional Impact of Covid-19 on Humanity:

## "I 'M Carrying The Covid-19 Virus And Will Infect And Kill My Only Child".

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**Abstract:- Introduction: Patients with excessive anxiety about a situation or object that is not obvious and imminently threatening tend to express their worries in physical symptoms and can confuse health professionals. Case presentation: We report a case of COVID-19 related anxiety-depressive disorder whose treatment was initially delayed because the patient expressed her anxiety in somatic complaints and, also by cultural and professional factors. Discussion: She referred herself to the Psychiatric team and was subsequently treated with combination of Cognitive Behavioural Therapy (CBT), Psychoeducation and psycho-pharmacotherapy with good outcome. Conclusion: Until treatment becomes available, COVID-19 has become a source of emotional disturbance globally, especially, for the at risk individuals. Clinicians should have a high index of suspicion for psychiatric disorders in patients who somatise their emotional problems and avoid unhelpful laborious and expensive investigations and, treatments on such patients. They should refer them for early psychiatric opinion and management to prevent delays that can adversely impact on their treatment outcomes.**

***Keywords:-*** *Somatisation, Anxiety, Cognitive Behavioural Therapy, Treatment, COVID-19.*

## I. INTRODUCTION

The novel COVID-19 pandemic and its mitigating factors such as lockdown, social distancing, wearing of masks, hand washing [1] and its consequent contribution to economic downturn, has been a major source of emotional distress in the form of excess anxiety to humanity. Health workers in particular face the dilemma of being duty-bound to treat their patients and also socialize with their relatives and are at increased risk of developing emotional problems. [1] This dilemma can manifest as morbid anxiety that can disturb the sufferer's functional ability and quality of life.

Anxiety disorder is a form of emotion characterised by excessive worry and apprehension, usually associated with other psychological and also physical symptoms that cannot be supported by physical examination and laboratory investigations. It is common in individuals with the worrier-type of personality and provoked by a stimulus that is imagined or unreal, internal of the mind of the sufferer and therefore conflictual. Unlike anxiety, fear is the emotional response to a known, external, definite and non-conflictual object or situation**.**

This differentiation between fear and anxiety is crucial in clinical practice because both the patient and the clinician need to be on the same wavelength as to whether they are dealing with real threats (fear) or imagined threats (anxiety). It is pivotal to support the anxious patient to manage such internal, insidious and vague threats in order to get the best outcome for interventions offered them.

Ghanaians are inclined to consult faith and spiritual healers before considering orthodox medicine because these healers pay due attention to their psychological distress than orthodox medical practitioners.[2–4] Culturally, their religiousity makes them prone to seeking spiritual explanations for their health problems. [2–4] Therefore, clinicians should have a high suspicion for psychiatric disorders in patients who present with physically unexplained symptoms.

Almost every patient is willing to comply with the remedy that will relieve them of their suffering so long as they are given brief psychoeducation on their presenting complaints and their management. It is therefore not unreasonable that the psychiatric patient who lacks insight is unwilling to take the recommended medications until they have a fibre of insight. Research has shown that treating psychiatric patients with psychotherapy and medications is superior to treating them with either of them individually. [5]

Against this background, we present a peculiar case of a lady who was managed for COVID-19 related severe anxiety-depressive disorder who initially somatised her excessive worry about the corona virus in the form of unexplained physical symptoms. She was initially investigated and treated by the physicians without satisfactory outcome until she eventually self-referred to the psychiatric team.

The aims of reporting this case are:

1. To prompt clinicians in all specialties of Medicine, especially Family Physicians and Psychiatrists, to suspect possible underlying emotional disorders in patients whose clinical presentation pose conundrum and consider their early referral for psychiatric opinion and treatment.

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2. To emphasise on how a combination of medications and Cognitive Behavioural Therapy (CBT) improved the symptoms and wellbeing of a patient suffering from severe anxiety-depressive disorder precipitated by worry about the novel COVID-19 pandemic.

## II. CASE DESCRIPTION

This is a case report that emphasises on the assessment of the patient, analysis of her management through the multi-disciplinary approach and measurement of its outcome using a valid and reliable instrument. Ethical clearance was sought from the Committee on Human Research, Publications and Ethics (CHRPE/AP/287/20). Again, she granted verbal consent based on reassurance that her identity will be kept anonymous.

**Case History**

The patient is Mrs S, a 38-year-old married senior clinical health-worker who had 14 years' fertility challenges until she eventually delivered her only child through In-Vitro-Fertilisation (IVF).

Although Mrs. S described herself as generally a worrier, she reported being reasonably happy and coping with her domestic, social and work responsibilities without difficulty until she became unusually worried in the early days of April 2020 after the Corona-virus outbreak became a global problem. [6]

As a health-worker in a busy teaching hospital, her profession demanded that she unconditionally attended her work as usual despite the Ghanaian government's enforcement of mitigating measures like lockdown of epicentres of infection, social distancing, wearing of face masks and use of sanitizers. As time went on and, multiple global news networks reported that large numbers of hospital staff were contracting and dying from the virus because of inadequate supply of personal protective equipment, she developed a preoccupying thought that she has contracted the virus and "about to infect and kill" her only child.

Around the same time, she believed that she developed a febrile illness which, she alleged, was inadequately investigated and treated by her medical colleagues in the same hospital. Mrs S could not specify her body temperature that was recorded as fever but felt she became warm. She complained about episodes of tightness in her chest and breathlessness with choking sensation in the throat which, she felt, were unrelated to the febrile illness. She paid to do her chest X-ray which, to her dismay, revealed nothing of significance. Her anxiety heightened and whenever she reported for work, she started passing loose stools and urinating frequently. She disclosed that on a few occasions, she became incontinent of urine at work. She also noticed that her concentration for her work was worryingly poor. She kept anticipating that she would make a catastrophic mistake that would kill a patient on her watch. She developed panic attacks which were associated with weakness in her legs and a fear of passing out.

She alleged, without evidence, that her colleagues had discovered that she could not cope with her duties and felt guilty about that. Unfortunately, she felt that her supportive husband was at his wits end listening to her "constant moaning" about her unsubstantiated health complaints.

One of the physicians prescribed Citalopram, an anxiolytic-antidepressant medication to her because he was convinced that Mrs S's physical symptoms were "symptoms in the mind" and she could be anxious and depressed. Mrs S refused to take it because she believed she was neither anxious nor depressed, an indication that she lacked insight that her physical symptoms originated from her wrong belief that she has become infected by the COVID-19 virus - somatisation of the emotional impact of Covid-19 on her.

Finally, and about four weeks later, Mrs S privately confided her problems to the hospital's Consultant psychiatrist, one of the authors. Based on the above narrative, a diagnosis of mixed anxiety-depressive disorder, according to the International Classification of Diseases Tenth revision (ICD -10) [7], precipitated by her extreme worry about the COVID-19 virus and her worry that she will infect and kill her only child with it, was made.

## III. TREATMENT AND PROGRESS

Following a case formulation with the clinical psychologists, also co-authors, a meeting was arranged with Mrs S. She was given brief psychoeducation to improve her insight for severe anxiety and depression and how they had affected the essential systems of her body, through autonomic system arousal, to produce her physical and psychological symptoms.[8] She consented to the treatment plan which included taking a week medical leave from work, complying with the prescribed medications and engaging in CBT once weekly with the psychotherapists and fortnightly outpatient review by the psychiatrist. She adamantly refused to take Citalopram because she alleged that its indication was not explained to her. Interestingly, she agreed to take Fluoxetine, also a Selective Serotonin Reuptake Inhibitor (SSRI).

The weekly structured CBT sessions focussed on restructuring her negative automatic assumptions such as "I am carrying the dangerous COVID-19 virus" and "My colleagues have discovered that I cannot cope with my duties", which made her felt guilty. Psychotherapy sessions, activities and effects are summarised in **Table 1.**

The Hamilton Anxiety Rating Scale (HAM-A), is used to measure the severity of anxiety.[9] This was used to measure Mrs S's level of anxiety before, during and after treatment as shown in **Table 2**. Her mental state examination findings before, during and after treatment are also documented in **Table 3** below.

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Table 1: Scheduled Activities and Content;

| WEEK (Session) | Activities carried out with Mrs S |
|---|---|
| 1 | Introduction to therapists, explanation of the nature and purpose of therapy, summary of medical history, identification of negative thoughts related to the COVID-19 pandemic, effects on body, behaviour and emotions. Using deep breathing and relaxation of body muscle groups exercises, patient learns about inverse relationship between relaxation and anxiety, creation of awareness that treatment will be focusing on deep breathing-relaxation exercises to stave off anxiety. Baseline HAM-A scored. |
| 2 | Patient recapped previous activities, therapists lead exercises emphasizing on deep breathing with muscle relaxation. Patient given homework on negative thoughts and emotions. |
| 3 | Therapists continued sessions with breathing-relaxation and CBT. Therapists introduce cognitive restructuring techniques (discussion and exercise) and give Mrs S cognitive restructuring homework. Session aims to change subject's irrational thoughts and behaviour to rational ones. HAM-A scored. |
| 4 | Session aims at cognitive restructuring. Homework in session 2 discussed with emphasis on identifying negative thoughts, effect on emotions and maladaptive behaviours. Breathing-relaxation and cognitive restructuring continue. Patient given homework to practise exercises and write down recurring cognitions. |
| 5 | Session summarises previous ones, patient's views sought and given the opportunity to consider maintenance and relapse prevention sessions. Patient asks for one maintenance session, promises to practise breathing-relaxation exercises on own and demonstrates good insight by saying "It's all in my mind but that is me". "I think I need to be gentle to myself." HAM-A scored. |

## IV. OUTCOMES AND ANALYSIS

Table 2: HAM-A scores

| WEEK | SCORE | COMMENT |
|---|---|---|
| 1 (baseline) | 52 | Very severe |
| 3 (during) | 27 | Moderate severity |
| 5 (end) | 22 | Mild to moderate severity |

HAM-A is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where < 17 shows mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe anxiety.

Table 3: Mrs S's mental state before, during and after five treatment sessions

| PERIOD OF TREATMENT | DESCRIPTION |
|---|---|
| Before | Extremely anxious about contracting COVID-19, infecting and killing her only child, sleeplessness, physical symptoms secondary to anxiety, expensively investigated and offered ineffective physical treatments, negative automatic cognitions and catastrophizing outcomes. |
| During | Her cognition, behavioural and emotional domains improved following CBT. |
| After | Changed insight for her morbid mind-set, its impact on her mental and physical health and overall wellbeing improved. |

## V. DISCUSSION

From the introduction and background to this case report, Mrs S is naturally a worrier and hinted that her mother is also a worrier. Therefore, she might have some genetic predisposition to morbid anxiety. Her 'usual high' anxiety surged to morbid levels due to her anxiety about the COVID-19 pandemic and its transmissibility. Her appropriate concern for a hospital acquired infection with the virus from inadequate protection became too much for her to cope with. Her worry about killing her only child was rational but a remote possibility. However, she could not be reassured easily that this is a rare event and that children are resilient and are not in the at-risk group for COVID-19 deaths. Her thought processes or cognitions were automatic and negative assumptions which are characteristic of individuals suffering from anxiety disorders e.g. "I am carrying the COVID-19 virus and about to infect and kill my only child". "My colleagues will find out that I am not coping well" and "I will kill a patient because my concentration is poor at work".[10]

CBT is a talking treatment that focuses on identifying and changing the patient's distorted thoughts, emotions, and behaviour. It has proven to be quite effective for anxiety and depressive disorders. [11,12] The general impression and principles of treatment in this case are that, Mrs S is making negative automatic assumptions which were not part of her thinking processes before the COVID-19 pandemic. She was catastrophizing imagined events which were adversely affecting her emotions and behaviour. It is not surprising that CBT helped her to re-examine her unhelpful automatic assumptions and subsequently improved her mind-set. As supported by HAM-A scores, the patient's anxiety severity reduced with each therapy session. It could be assumed that, Mrs S's physical symptoms which were predominantly psychological, could have been treated swiftly if a multi-professional approach had been used from the outset and before she referred herself.

Ghanaians culturally do better when the therapist pay due attention to their psychological distress and therefore consult faith and spiritual healers before considering orthodox medicine. It can be deduced that Mrs S lost trust in the doctor-patient relationship with the physicians and this adversely affected her willingness to take Citalopram but concurred to take Fluoxetine recommended by the psychiatric team after psychoeducation. Again, due to the volume of work load, the physician could have referred Mrs S to the psychiatric team according to the principles of integrated health care after ruling out organic cause for her symptoms with physical examination and investigations.

In summary, CBT-psycho-pharmacotherapy is a treatment that can help individuals to think and behave more rationally by using principles and laws of behaviour. [13] Its goal is to break the negative cycle that is tailored to the cognitive, behavioural, and physiological domains of their being when unwell. [13]

## VI. CONCLUSION, IMPLICATIONS AND LIMITATIONS

Until treatment becomes available, COVID-19 has become a source of emotional disturbance globally, especially, for the at risk individuals. Clinicians should have a high index of suspicion for psychiatric disorders in patients who somatise their emotional problems and avoid unhelpful laborious and expensive investigations and, treatments on such patients. Referral of such patients for early psychiatric opinion and management to prevent delays that can adversely impact on their treatment outcomes is recommended.

A lot has been documented on CBT and its effectiveness in managing anxiety, major depressive and, indeed, psychotic disorders. This case report adds to this evidence and offers a useful opportunity for clinicians to adopt in managing cases which present with similar conundrums.

There are limitations of this case report. Firstly, only a summary of Mrs S's story could be presented because of publication and ethical reasons. Secondly, a representative sample size of COVID-19 related anxiety-depressive subjects is needed to be treated with the interventions above to make the effectiveness generalizable.

## DECLARATION OF INTEREST

None

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