



Research Article

The Missing Link Between Postburn Scars and Mental Disorders: The Basis of Postburns Mental Illness in Burns Centers in Calabar, Nigeria

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Abstract

Background: Postburn scars following severe burn injury is a common occurrence. A reasonable percentage of patients become mentally ill as a result of low body image and self-esteem. The aim of the study was to give a theoretical framework and draw up a schematic diagram to link severe burn scars and the development of mental illness.

Patients and Method: A 5-year prospective study which started from January, 2017 to December, 2022, including 68 patients with severe burn injuries. Their socio-demographic data and types of mental illness were documented. The site of the scars were also noted and evaluated. All severe burn patients, especially those involving the face, were included. All patients with abnormal postburn scars who developed mental illness were included. The exclusion criteria were history of previous and present mental illness at the time of admission and those patients with incomplete records. Data were evaluated in terms of percentages and p-values. The data was evaluated with Statistical Package of Social Sciences (SPSS) version 20.0.

Results: A 5-year study of 68 patients with abnormal postburn scars who developed mental illness were analyzed. The sex, male, n=27(39.7%), female n=41(60.3%) with M: F of 1:0.7; marital status, the single, divorce and separated has a p>0.001; highest educational level has a positive correlation with p-value >0.001, age 18-39 has 21 patients against 47 and above with p-value > 0.001; occupation (company workers and self-employed) has positive correlation and scars of the exposed parts were causes of low self-esteem. Concerning types of mental illness, depression n=22(32.4%) and anxiety disorder n=19(27.9%) were the commonest presentations among the cohort.

Conclusion: Abnormal Postburn scars have led to continuous self-evaluation due to body image and self-esteem dissatisfaction. This has led to the development of mental illness.

Keywords: Self-Objectification; Postburns; Mental Illness; Mental Disorder

Introduction

Burn injury is a common occurrence among patients that visit a Burn Center. Burns healed leaving scars as aftermath of the injury. The more severe the burn injury is the worse the type of postburn scars. A record of severe burn survivors has revealed the occurrence of mental illness, especially when there is involvement of the face and hands, a disfigurement that is difficult to hide from the society. The incidence of mental illness is more among the youths than the older adults, an observation which may be attributed to their consciousness in beauty. The aim of the study was to show a cause and effect relationship between burns injuries and the development of mental illness. Secondly, we are to describe the supportive measures to be given to mentally sick patients following postburn scarring. Thirdly, we are to develop schematic diagram that links all the sub-variables and dependent variables for better understanding of the problem.

The objectification theory postulates that girls and women are typically acculturated to internalize the observer's or society's perspective as a primary view of their physical selves [1]. This leads to perpetual self-evaluation. This increases the chances of postburn women to be ashamed and generated anxiety. This also reduces motivational states and awareness of internal bodily states. Self-evaluation or self-objectification could lead to poor self-image and self-esteem. This could further lead to dissatisfaction and emotional instability with consequent development of mental illness. These accumulated unhealthy experiences may account for mental health disorders such as anxiety, depression, sexual dysfunction and eating disorders. The objectification theory also explains why women develop mental illness more than the men, given the same situation and parts of the body burnt. Their beauty consciousness and measuring up with ideal standard of beauty prone them to constant self-evaluation [2]. The constant use of mirrors to continuously evaluation themselves is a good example.

A study suggested that respondents have different perspectives on the importance of physical attributes, emotional well-being, internal beauty and self-confidence [3,4]. Thus, the alteration of physical attributes by burns scars will lead to low emotional well-being (poor self-image), low internal beauty (low self-esteem) and low self-confidence (reduced societal acceptance).

Acceptance and Commitment Theory (ACT) is proposed as alternative intervention aimed at strengthening psychological flexibility including acceptance and discovering and pursuing one's values [5]. Burn survivors may benefit from cognitive self-esteem building interventions, such as Competitive Memory Training (COMET) which focuses on the inhibition of negative self-beliefs by enhancing accessibility of positive self-beliefs [6]. This study has helped to elucidate patients' benefits from psychological intervention directed at dealing with negative self-evaluation and reconstructive surgeries that were targeted to improve postburn scars (Fig. 1).

Physical appearance is one of the basic factors in romantic relationship, especially at first encounter. If a person has to impress the counterpart in a short time beauty is the criterion which determines the level of impression of the partner. This beauty is then destroyed by burned scars [7]. Featherstone, described that with increasing competition in the labour market people have begun to seek any competitive advantage [8]. Therefore, physical appearance has become a factor that could significantly enhance the chances of success for both men and women. There are also suggestions that physical attractiveness could favourably affect other aspects of employment such as actual job status or earning power [9,10]. This study argues that the damage of body image may lead to poor acceptance in work and also change in work status. This work rejection could lead to depression or other expressions of mental illness.

Patients and Method

A 5-year study of 68 patients with abnormal postburn scar who developed mental illness was analyzed (Table 1). The sex male, n=27(39.4%), female n=41(60.7%) with M:F of 1:1.6; marital status, the single, divorce and separated has a $p>0.001$; highest educational level has a positive correlation, age 18-39 has 21 patients against 40 and above with p-value of 0.001; occupation (company workers and self-employed) has positive correlation and scars of the exposed parts were causes of low self-esteem. Concerning types of mental illness, depression n=22(32.4%) and anxiety disorder n=19 (27.9%) were the commonest presentations among the cohort. Fig. 1 showed the distribution of postburn mental illness such as depression and anxiety disorder, Posttraumatic stress syndrome and eating disorder like anorexia nervosa as the leading manifestations among the cohort.

Results and Discussion

Postburn scars produced negative feelings with dissatisfaction of the body image and self-esteem. The increasing occurrence of severe major burns left scars that were not desired by patients. Full thickness burns as well as deep partial thickness burns produced abnormal scar like hypertrophic scars and keloids. The formation of contracture especially at the flexural areas also leave disfigurement that is not desired. The study had 68 patients with a male: female ration of 1:1.6. The study showed that there were more women than men who developed mental illness among the cohort. A study concluded that female gender was associated with body Image dissatisfaction and low self-esteem due to fear of negative evaluation [11]. This showed that women have poor or even worse mental and psychological adjustments following postburn scars disfigurement. Contrary to this, Sinnott and Shifren, et al., said that gender was not significantly associated with perceived stigmatization, which previous studies showed that stigmatizing behaviour related to visible differences present in both men and women [12].

Concerning marital status, the single, young separated or divorced women have a higher tendency to develop mental illness following postburn scars compared with married people. The study revealed that this category of people felt that due to the disfigurement they would not likely find their spouses. The married women had no significant correlation to the development of mental illness. According to Zurbriggen, et al., physical appearance is one of the basic factors in romantic relationship, especially at first encounter. If a person has to impress the counterpart in a short time, beauty is the criterion which determines the level of impression of the partner [13]. This beauty is then destroyed by burned scars which leads to low self-esteem and reduced social relationship. The drive by women to be pretty and the reward of being loved by men will drive a postburn patient to be mentally ill. Featherstone, argued that in a consumer society, social status depends on of a person [8]. Bourdieu, described beauty as a kind of social hierarchy and the idea that beauty could be thought of to be a symbolic capital [9]. Hence, the market value of postburn scarred patient depreciates and he/she feels emotionally and physically dissatisfied. Western societies tend to objectify people in general, treating them as if they are things or commodities, because westernized societies are saturated with heterosexuality, whereby gender acts as a pervasive organizer of culture [14].

The level of education did not significantly influence the development of mental illness in the cohort. However, an educated postburn patient who constantly watched the images of celebrities that are regarded to be beautiful and ideal standard of beauty, it may enhance her body insecurity and lead to poor self-image and negative comments by the society. This negative self-evaluation could lead to mental instability.

The age of the patients is another determinant of postburn mental illness. It is noteworthy that the age groups 18-29 and 30-39 had the highest occurrence of mental illness. It was seen that these categories of persons were not yet married or were separated. Thus, the need for a spouse was top in their mind for consideration, thereby provoking anxiety and fear of not being accepted socially for marriage. Tartaglia and Rollero, noted that the younger girls and ladies were more driven into the sick role of mental illness due to alteration of their beauty by burn scars with consequent stigmatization, shame, reduced self-worth and body-image [15].

The type of occupation is a determinant of mental instability in postburn scarred patients. Company workers were greatly affected. These workers and celebrities have a higher likelihood to develop mental illness compared with government workers, unemployed and self-employed persons. Engelen-Maddox, stated that college women in United States associated with greater beauty-ideals with greater employment and economic opportunities [16]. Featherstone, said that women may attend to their body image in instrumental manner in order to increase their chances in a competitive capitalist society [8]. He further opined that physical appearance has become a factor that could significantly enhance the chances of success for both men and women in the labour market.

Parts of the body burnt with abnormal scars could be a cause of serious concern for the patient or client. The study revealed that exposed parts of the body like face, neck, hands and forearm could become a cause of concern for postburn patient. With concerns to the aesthetics of these exposed areas, patient may become unduly worried. This could lead to anxiety disorder or depression. The need and concern for reconstructive surgery to reduce or improve the aesthetics of the scarred parts is so very important.

These different types of mental illness were revealed by the study to include depression such as unipolar or bipolar, eating disorder e.g anorexia nervosa, posttraumatic stress syndrome, etc. The mental illness was seen among artists, marketing agents, electronic media workers and top public officers. Tiggermann, supported the study that depression, anxiety disorder, eating disorder, post traumatic stress disorder, etc were mental illnesses that were associated with postburn scars [17].

Hypertrophic scars and keloids were common occurrence of burn injury complications among negroes. Hypertrophic scars occur within weeks after burns and rapidly increase within 3-6 months, then it is followed by a static period which begins to regress afterwards. Failure to address the abnormality after one year could be associated with keloids formation. Formation of scars in burns patients was associated with contractures in flexural areas which limited movement. The presence of abnormal scars on the face and/or the hand areas led to physical and psychological consequences. The treatment was usually reconstructive surgery if contractures, huge keloids or hypertrophic scars were involved. However, combination therapy such as surgery and adjuvant therapy (i.e radiation or corticosteroids injection) was the choice of treatment. After treatment, long-term follow up and conservative therapies were needed for complete functional and cosmetic recovery. The role of preventive and treatment of scars

in postburn injuries should be taken seriously. The health system responses to treatment required social and psychological support.

Conclusion

Postburn abnormal scars and contractures were well known complications of severe and major burns. The burns on the exposed parts of the body with ugly scars generate psychological problems due reduced self-image and poor self-esteem. The dissatisfaction because of the ugly scars is constantly self-evaluated by the patient leading to the development of mental disorder. The study concluded that self-objectification due to reduced body image and self-esteem with stigmatization was a major factor in the development of postburn mental illness. The study suggested that reconstructive surgeries and psychological supports were possible remedies to postburn patients.

Conflict of Interest

No conflict of interest from any source.

Ethical Approval and Consent to Participate

Ethical approval was obtained by the Health Ethical Committee of the University of Calabar Teaching Hospital and consent to participate was issued and participants counseled on the importance of the research.

Consent for Publication

Consent was given for publication.

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Author's Contribution

MBA Ozinko contributed in the drafting and revising critical points for intellectual content. He is the corresponding author. Emmanuel Olose contributed in the acquisition of data and analysis and interpretation of data. Otei Otei also revised the manuscript. All authors contributed in the final approval of the version to be submitted.

Declaration

Research was conducted in accordance with relevant guidelines/regulations applicable when human participants are involved.

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