JODR
Volume 9, Issue 1, 2022

Patients' Strategies for Coping with Consequences of Blow-Out Fractures of the Orbit

[1]Faaiz Alhamdani, PhD, [2]Ian Corbett, PhD, and [3]Justin Durham, PhD
[1]Department of Clinical Sciences, College of Dentistry, University of Medical & Pharmaceutical Sciences, Iraq. [2]Department of Oral Surgery (Honorary Senior Lecturer),School of Dental Sciences, Newcastle University, UK. [3]Head, School of Dental Sciences. Professor of Orofacial Pain & Hon. Consultant Oral Surgeon, UK.
Corresponding author: Faaiz Alhamdani
E-mail: faaiz@ibnsina.edu.iq

Received September 18, 2021.
Accepted for publication on November 07, 2021.
Published March 17, 2022.

Abstract

Background Coping mechanisms are cognitive and behavioural actions to overcome health problems and their consequences. To understand how patients with blow-out fractures of the orbit cope with the outcome of this injury, it is imperative to recognise the sequence of physical and emotional stress they go through. Patients with blow-out fractures have been found to experience different degrees of negative feelings related to fear and uncertainty. Fear in this case is essentially related to fear of losing vision, inability to work and inability to drive. Uncertainty about the outcome of trauma is an additional fear factor. **Objectives** to explore coping strategies adapted by patients sustaining orbital blow-out fractures. **Materials and Methods** a purposive sample with maximum variation (n=21) was taken from patients who were treated for blow-out fractures of the orbit in the Oral and Maxillofacial Department in a secondary care hospital in the United Kingdom. Semi-structured interviews were the preferred method for data selection for a logistic reason. Line-by-line coding was employed to generate data, which was organized using the Framework Approach. Data were organized theme by theme and case by case. Principles of Constant Comparative Method were followed for inductive iterative analysis of data. **Results** both coping strategies; physical (problem-focused) and psychological (emotionally focused) have been identified within our data as being reportedly adopted by patients with blow-out fractures. Knowledge about the injury, treatment of the injury, restoring the sense of life normality helped patients to regain their confidence. **Conclusion** psychological coping with the consequences of orbital blow-out fractures seems to be achieved through patients' regaining their confidence. The passage of time after treatment plays a positive role in this respect.

Keywords: orbital trauma; blow-out fractures; diplopia; coping;qualitative research; generic qualitative approach

Introduction

The term of blow-out fracture of the orbit (BFO) refers to the orbital floor fracture without the involvement of the orbital margin. It was first introduced by Converse and Smith (Converse and Smith, 1957). This type of trauma appears to cause impairment, activity limitations, and participation restrictions. Patients with blow-out fractures have been found to experience different degrees of distress and frustration.

ISSN 6417-2310

These negative feelings occur as a result of the trauma itself and related to fear and uncertainty (Yaqub et al, 2016). Fear is a usual response to trauma. However, in blow-out fractures of the orbit it is essentially related to fear of losing vision, inability to work and inability to drive. Uncertainty about the detrimental effect of trauma on health is an additional fear factor. Patients seem to be specifically disturbed by diplopia, which is considered by patients as a visual acuity problem. Lack of full comprehension of the reason behind the diplopia can be compounded if the communication from the clinical team is ineffective. Delay in implementing definitive treatment seem to exacerbate patients' fear and frustration (Yaqub et al, 2016). Physical activity limitations caused by diplopia may influence the patient's ability to work, and impact relationships with family, employers, and wider social circles (Falvo, 2005). It is acknowledged that the relation between disabling health conditions and social life challenges can affect the perceived individual self-image (Falvo, 2005). Coping mechanisms are cognitive and behavioural actions adopted by patients to overcome health problems and their consequences (Ito and Matsushima, 2017; Leventhal et al, 1989). There are two major types of coping: 1) Problem-focused coping, which addresses the troubled relationship of the person to the surrounding environment by changing the environment itself. 2) Emotion-focused coping, which deals with the problem through either denial or distraction from the problem. The latter form of emotion is considered the most powerful and widely used coping mechanism to regulate stress (Lazarus, 1993). There seem to be limited published literature examining the coping mechanisms used by patients to deal with the consequences of blow-out fractures

Aim of the study

To explore the coping strategies adopted by patients who have sustained orbital blow-out fractures

Materials and Methods

After obtaining ethical approval, (09/H0907/73) a purposive sample with maximum variation (n =21) was taken from patients who were treated for BOF in the Oral and Maxillofacial Department in a secondary care hospital in the United Kingdom blow-out fractures of the orbit. Sampling criteria were grouped to preoperative and postoperative surgically managed patients; conservatively managed patients; gender; age >18; different severity of Binocular Single Vision (BSV) (low, middle, and high score categories); pre and postoperative course (Table 1). All patients with isolated blow-out fractures who consented to participate were included. Semi-structured interviews were the preferred method for data selection for logistic reasons. They allow privacy, which will give patients a more comfortable environment to share their thoughts and perception in-depth. Trauma, for some individuals, is an embarrassing experience, which they do not wish to share with others. The interviews took place in a hospital setting, whenever it is convenient for the patients. The interviews were conducted by one trained interviewer (FA) using a flexible topic guide, which was informed by expert opinion and research on strabismus and diplopia (Hatt et al, 2007). Interviews were continued until data saturation was reached. This means there are no new ideas or themes that emerged from new data.

An inductive approach was largely adopted, as little is known about patients' strategies for coping with this type of trauma. Generic qualitative approach, which cut across the basic terms shared by different qualitative methods, was employed. Line-by-line coding was performed to generate data. This coding means going through the text and giving a code (name) fro each line (Gibbs, 2007). Then the codes are organized using the Framework Approach. Data were organized theme by theme and case by case (Ritchie et al, 2013). Principles of Constant Comparative Method (Glaser and Strauss, 1965) were followed for inductive iterative analysis of

ISSN 6417-2310

data. Iterative means that data analysis begins with data collection (Alhamdani, 2020). Two researchers (FA & JD) were involved in data analysis. Table 1 will provide the cross-reference for patients' quotations shown in the results section.

Results and Discussion

Both coping strategies; physical (problem-focused) and psychological (emotionally focused) have been identified within our data as being reportedly adopted by patients with blow-out fractures; physical coping (problem-focused) and psychological coping (emotional-focused). Emotion-focused coping is more likely to be adopted when the person views the stressor or the problem as an uncontrollable event (Carver 2007). In this aspect, the person's attempt to deal with the impact of the trauma is emotional coping.

Physical (problem-focused) coping

The study data show that there was a recurrent physical strategy reported by patients to deal with diplopia in the peripheral fields of gaze. This strategy involved adopting a compensatory head position which has been reported in the literature before in the case of vertical diplopia which results in a compensatory head flexion or extension Sullivan et al, (1992). Patients reported that, over time, they started to adapt by moving their heads towards the side where the diplopia occurs. Patients report that the use of a compensatory head position is most important during driving and using the stairs more than other life activities. "I've already noticed that I'm starting to compensate for the areas of vision that I can't quite reach. Like I do just sort of automatically just tilt my head instead of looking up. I know my range." (Case 1, Female, aged 24, Fall). "I do drive, yeah. It was a little bit double vision when I did start to drive, and obviously when you were looking to the right and see things coming, I don't know, maybe off junctions or round roundabouts, it was hard to maybe judge cars the same way unless you actually turned your whole head instead of just using your eyes. But I think it's just something I've become adjusted to now. I wouldn't say the double vision's there as much, but obviously when it does come I do tend to move the head a little bit more than just using the eyes." (Case 12, Male, Aged 21, Assault). If surgery is not a treatment option, sometimes prism glasses are prescribed to help patients with a certain degree of diplopia. Some patients, however, described wearing these prisms as an unpleasant experience. It seems that some patients prefer, either a compensatory head position or periods of "relaxation" for their eyes from time to time, as they report diplopia worsens with exhaustion. "I didn't get on with them well.... so I lost them, but I was quite happy that I lost them. I literally probably maybe dealt with them for about six months. (Case 15, Male, aged 24, Sport injury). For cases where diplopia is in the primary central field of the gaze the issue is different. It is not useful to manoeuvre the head position because diplopia is in the central field of vision. Some patients find it easier to cover the affected eye, using their eyeglasses, or just close the affected eye. Some female patients, however, do not like to "scrunch" their face to use the normal eye and as such, they have to deal with the problem of double vision. Other patients reported becoming dependent on the family in doing their daily life activities. "These are my glasses. I've just put tape on the back. What I think would have been good as well if I'd have been … you know, eye patches. If I had one of them from the start that would be easier because you do … on Thursday I was walking around feeling dizzy." (Case11,Male, aged 26, Assault). "I didn't really manage that well, like I just had to deal with it, like I closed one eye." (Case 17, Male, aged 19, Assault). Some patients used other ways to deal with constant diplopia (diplopia in the central field of vision).

[1]A wedge shape refracting medium used to achieve binocularity Rowe F. 2000. Glossary. In: Rowe F, editor. Clinical orthoptics. First edition Reprinted ed.: Blackwell Science Ltd.

ISSN 6417-2310

One patient noticed that the false (higher) image is weaker, so she started to rely on the (lower) stronger image. This adaptive mechanism has not been seen to be followed by other patients with diplopia in the primary gaze. This is possibly because it is not always consistently the same image which is incorrect: some patients see both images as real; despite they believe that one of them is unreliable. "I think I just sort of got used to it really and knew that the one image was stronger than the other image I suppose. The lower image was stronger and was the correct one. So, I could sort of ignore the upper image." (Case 2, Female, aged 62, Fall). "Well they're both real images, but this one was off-set to … if I was looking out that window it would be up there. So I would know that that's the wrong vision. If I went to touch it the window would be where this eye is seeing it, yeah. Now if I went to touch it with this eye – miles out, nowhere near." (Case 3, Male, Aged 40, Work injury).

Psychological (emotion-focused) coping

Psychological coping has been defined as an individual's attempts to preserve self-worth and value. It involves bringing meaning to the altered situation and its effects on the body and soul (Bury, 2002). Individuals use coping to manage, control, or reduce the stress associated with significant life events in an attempt to restore psychological equilibrium after a traumatic event (Falvo, 2005). Coping can be: successful or unsuccessful; consolidated or fluid; consistent or inconsistent according to the environmental demands (Aldwin and Yancura, 2004; Lazarus, 1993). Psychological coping should be understood as the product of multiple biopsychosocial influences (Thomas, 2004), as coping depends on other people's reactions towards the problem and the degree of emotional support and reinforcement provided by them (Bury, 2002). This may be the reason behind the difficulty in determining why people use specific coping strategies in relation to specific stressful encounters (Lazarus, 1993). Psychological coping in trauma should also be considered with respect to active or passive coping strategies. In active psychological coping, the patients confront their condition, learning useful skills to help them to be engaged in treatment to control their condition. "There's people much worse than yourself. You know, people have lost limbs, people have lost family members and life. People live in poverty. How do they cope in life? And that's, that's the way I think of things. I look at a negative situation – how can I make this positive?" (Case 3, Male, Aged 40, Work injury). Alternatively in passive psychological coping, patients refuse to face the problem and try to deny its seriousness. Denial or avoidance aims to help them escape from feelings of distress. The essential problem with this way of coping is that it does nothing about the stressor or its impact (Carver, 2007). That is why it has been considered a maladaptive strategy (Falvo, 2005; Olff et al, 2005). It has been argued, however, that the dichotomy of acceptance and denial, as used by health care professionals, should be considered according to the patient's perspective within the concept of optimism and pessimism. Some people with illness, as they hold the burden of the illness in the background (denial behaviour), can sustain the sense of well-being that allows them to live as they wish (Paterson, 2001). It is believed that passive (denial or avoidance) coping is easier for patients with the presence of sort of distracting habits or behaviours that encourage the patient to avoid thinking about the trauma and its sequences (Olff et al, 2005). Avoidance as a cognitive behaviour aims to protect the traumatised person's thoughts from exposure to reminders of the traumatic event (Carlson, 1997). "I just … I'm one of them who just get on with it. I'm not … sometimes I get angry and think 'why me' but then it just goes. I just watch the telly and take me mind off it. I just watch the telly and try not to think it's there until I've got to put my drops in and I realise and then it's there. You know, just sort of things like that, just try to forget about it. Put the telly on or have a bath or, you know, just put the radio on." (Case 14, Male, aged 43, Assault). "Now, in my life, what I do, you just get

ISSN 6417-2310

on with it. I don't do anything over dramatic or anything" (Case 21, Male, aged 47, Assault). Blow-out fractures have the potential to be a life-changing experience in both negative and positive ways. There is evidence in the literature shows that trauma could have a positive influence on people experience in different aspects, such as perceived changes in self; a changing sense with the relationship with others; and a changed philosophy of life (Tedeschi and Calhoun, 1996). "But actually, with the eye condition as well, it has changed us on me outlook on certain aspects of my life, as I was saying before. It has made me like think about things differently. .... I think I've found me cloud to sit on. Do you know what I mean? Just like yeah, that's cool. I'm just like a bit more sort of humble with things. Do you know what I mean? .... I don't get extra stressed over stupid things anymore. Do you know what I mean? Like waiting in queues and sort of like, you know. .... I've just like cut a lot of things out. It has changed a lot, I know it's changed us like a person. I know that for a fact, because I actually feel different. I feel different towards things." (Case 6, Male, aged 45, Assault). On the other hand, the state of anger and frustration from the trauma could make the patient refuse to accept the physical limitations imposed as a result of the trauma, even if these limitations are minor degrees of diplopia. This might then present an obstacle in coping with the injury. "My double vision is bad because it's there and it is an injury and it shouldn't be like that. You know, I have always had good vision and I shouldn't have to deal with it when I'm … even though like I say, I shouldn't have to deal with it in my life." (Case 14, Male, aged 43, Assault). "Obviously it's not going to make you happy so it's just like … I'm not happy that I've had to have a scar there. At the end of the day, I had no option, it was either that or I have no vision. But it's just like obviously I'm not really happy that I've got a scar above me eye. And I'm not exactly a good-looking kid anyway and I need to try to keep all the looks that I can." (Case 17, Male, aged 19, Assault). Patients can perceive trauma as a sudden unexpected incident, in which they have become involved with often no justifiable cause. This, also, negatively influences the way patients can deal with the trauma. This can make it a difficult situation to deal with. "I think it's always difficult to adjust to life when things happen very suddenly, whereas if things happen gradually, you have time to adjust yourself and find coping mechanisms in their own particular period of time. But if things happen very rapidly then sometimes it's difficult to cope with because, you know, you don't have time to find any mechanism to try to compensate for things." (Case 7, Male, aged 32, Assault). Some trauma patients may become incapacitated through trauma-related depression due to its wide psychological influence. That is why it is important to understand the patient's need to help to overcome it (Horn, 2009). "it was frustrating and boring and obviously I did feel a bit cabin, a bit cabin, feverish a little bit sort of claustrophobic not being able to go out and do much." (Case 1, Female, aged 24, Fall). The discussion of the data so far has shown that both the lack of knowledge about the blow-out fractures especially in the early post-injury period and consequent fear about permanent visual loss can potentially exert a negative psychological influence. The patient becomes uncertain about their ability to cope with the prospect of possible loss of vision. This doubt is especially pertinent for patients who perceive (and/or possess) severe or complete double vision. "It made me think, how I will cope with it. I don't know if I ever could cope with it. I really don't. I'm like … things like sort of like … I think it's like banging in to me heart and that. Seeing colours and seeing things are important to me like. I would rather go deaf; I would rather go deaf or mute than go blind." (Case 14, Male, aged 43, Assault). Trauma-related psychological disturbances are known to impact on patient's cooperation during the treatment and recovery period (Hull et al. 2003). However, the surgeon might help the patient to tackle the negative psychological effect of trauma. This could be achieved through the active engagement of patients with their care

ISSN 6417-2310

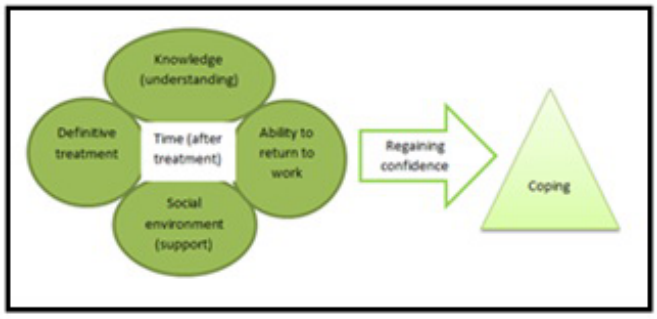
(Coulter et al, 2008). Our data demonstrated that knowing the injury helps the patient to understand. Understanding the problem will enable the patient to adapt is a positive coping strategy, as it enables him to change his look toward his injury and overcome its effect (Coulter et al, 2007). Knowledge about the medical condition can provide the individual with an opportunity to conceptualise the disease process in a manner by which he can hold the disease in the background of his thoughts (Bury, 1991; Paterson, 2001). This foreground and background shifting perspective model (Paterson, 2001) suggests it is possible to shift the illness perspective from the foreground to the background of one's mind. Paterson suggests that learning as much as possible about the disease will ensure a wellness in the foreground perspective. Accordingly, the self, not the affected (wounded) body, may then become the source of identity. The wellness in the foreground perspective separates the diseased body from the patient. The "wounded" or affected body will become objectivised and no longer control the patient. Furthermore, knowledge, from the perspective of self-regulation, influences coping through changing disease representation. Disease presentation and coping process are linked together. Within the context of self-regulation, people as health problem solvers attempt to improve their health and coping with disease as they define and re-define them (De la Fuente et al, 2018; Leventhal and Contrada, 1998). Based on our data, helping the patient to understand the difference between double vision and vision loss, from the beginning, might provide the patient with the early support they need. This early support could prove crucial as the immediate post-injury period, which can last for a few weeks to months post-trauma is when coping occurs (Tuval-Mashiach et al, 2004). "I felt confident as my vision is okay because the eye doctor gave me the impression that the vision itself, apart from there's a bit of damage to my pupil. There might be a little bit of glare. But it's the double vision. There's nothing wrong with my eye itself, it's the muscles around it and the movement needs lining up I think". (Case 11, Male, aged 26, Assault). The influence of such knowledge can be seen if the patient had previously experienced this type of trauma. The following quote shows how the patient perceives his blow-out injury when it occurred for the second time to the same side. "I'd been hit in the exact same place and I felt like … it's funny but it was like a trapped nerve. Sort of like a trapped nerve like a funny like sting, weird to explain. But I knew that it had happened, I knew that it had been broke again... I was a lot more scared the first time because obviously I didn't know whether it would like go away or whether it was going to be really bad double vision all the time. But the second time like … I knew that I'd broke my eye again. The second time I was more worried about in case like you wouldn't fix it." (Case 17, Male, Aged 19, Assault). The quote above also reflects the quality of communication this patient may have had during the previous treatment sessions. This communication then enabled the patient to understand his symptoms. Some patients find that searching the web for the injury can help them to understand more about their problem and react more positively to the information provided by the surgeon. This, however, is not the case for all patients, since some seem to believe that these websites provide general information, which is not necessarily related to the patient's specific condition. "What I got from the internet was: Diagrams of the eye and the muscles and which muscles help move the eye and that, and this Just sort of gives an understanding of maybe what was wrong with my eye. So I kind of had an idea so when I'd seen the consultant and that just so I had a bit more of an idea when he was talking about stuff." (Case 14, Male, aged 43, Assault). "[I did not look through the internet] because it tells me nothing about me". (Case 7, Male, aged 32, Assault).

ISSN 6417-2310

Table (1): The characteristics of the study subjects.

Patient code	Gender	Age	Cause of fracture	Pre or postop.	BSV score category	Injury and treatment course
1	Female	24	Fall	postop	Low	2 months
2	Female	62	Fall	postop	Low	2nd month
3	Male	40	Work accident	postop	High	2nd month
4	Male	48	Assault	preope	High	2 days before operation
5	Female	48	Fall	postop	Low	30 days postop
6	Male	45	Assault	postop	Low	1 day postop
7	Male	32	Assault	preop	Middle	within 2 weeks of injury
8	Male	22	Assault	conservative	High	within 2 weeks of injury
9	Female	40	Assault	conservative	High	3 weeks after injury
10	Female	22	Kicked by accident	preop	High	6 weeks after injury
11	Male	26	Assault	preop	Low	one day preop
12	Male	21	Assault	postop	High	6 weeks postop
13	Male	19	Assault	preoperative	Middle	2 weeks post injury
14	Male	43	Assault	Conservative	High	5 days post injury
15	Male	24	Sport injury	Preoperative	Low	1 week after injury
16	Male	24	Assault	Conservative	High	2 weeks post injury
17	Male	19	Assault	Postoperative	Low	2 months post 2nd surgery
18	Female	75	Assault	Postoperative	High	18 months postoperative (from the retrospective group)
19	Male	55	Kicked by animal	Postoperative	Unassessed	3 weeks after surgery
20	Female	30	Assault	Postoperative	Low	4 weeks after surgery
21	Male	47	Assault	Postoperative	Low	More than one year after surgery

Figure (1): The study theoretical construct (Ver.7).



Restoring the sense of life continuity (Influence of job and social support)

It has been noticed that fear of losing one's job is one of the elements which can add to the patient's suffering (Alhamdani et al, 2016). In contrast, returning to work positively influences patients' confidence. Loss of confidence, as shown earlier, is one of the indirect sequelae of the injury. It might be important, therefore for clinicians, to consider the patient's ability to work again as an important management outcome. "[as I am going back to work] I'm starting to feel a bit more confident and I'm starting to feel happy that my eye's like and my cheeks, the swelling's gone away, the black eye's gone. I'm just waiting for the blood shot to go away and I'm feeling happy about it and a bit more confident and I'm starting to get back into being myself." (Case 8, Male, aged 22, Assault). "It concerned us a little bit but I was pleased more than anything because I'll be able to get on with … I won't have it as bad, I'll only have it when I look right up, so I should be able to drive okay and I should be able to do my job okay. In me daily life I should be alright. So it was a relief. (Case 14, Male, aged 43, Assault). The increase in confidence related to a patient's ability to perform his job is one of the reasons why patients report that they try to return to work even if they still be unable to perform their jobs in the way they used to. Although we cannot ignore the financial factor, still, regaining confidence through returning to work is an important part of patients' perceived recovery process. The other positive aspect of returning to work is, as the patients report, the fact that it occupies their thoughts as opposed to the injury persistently occupying their thoughts. A frequent preoccupation with their injury reportedly makes it more difficult for the patient to be alone because his/her mind tends to be engaged with negative thoughts all the time. "I've got to work. And basically, that keeps your mind off things anyway. When you're fenced in the house that's when you start thinking about how bad it could be." (Case 4, Male, aged 48, Assault).Patients might cope with the trauma using more than one

ISSN 6417-2310

coping strategy. Family members and friends around the patient help provide the patient with psychological support. Despite that Lazarus, (1993) pointed out that social support seeking is not a consistent coping mechanism, our study data would suggest individuals with blow-out fractures rely on both physical and psychological support provided by family members and friends. "Luckily my partner's helped us out a little bit. Just generally like that really with obviously reassurance that obviously everything's going to be alright. The financial side of things. And same with family and friends made sure that obviously that if I need anything they're there." (Case 12, Male, aged 21, Assault). Glynn et al, (2003) suggested that emotional support in the early post-injury period plays a positive role on trauma patients. The lack of support in the early post-trauma period, on the other hand, has been found associated with a higher rate of post-traumatic symptoms at 1 month from the injury. Social support and communication might also be helpful factors in coping with distressing feelings associated with the trauma and its consequences (Bury, 1991; Mechanic 1995; Sippel et al, 2015). Charmaz, (1983) explained that social contact can help minimise the patient›s feeling of "loss of self" as a result of his/her health problem. It gives the ill person the feeling of being valued as a person and therefore "the loss of self" is incomplete. In this study's data, this has been reflected by the fact that social support helped the patient regain confidence. "[it was difficult 1st] Couple of days, yeah. And then like, you know, having family round and that was what, you know, pushed us and got the confidence and everything. (Case 16, Male, aged 24, Assault). In our study, social support took more than one form. Family members and friends might help the patient with his/her daily activities as well as providing him with potentially useful information concerning his/her condition. "If my sister and I went to the shops, she's got this bag, like a shoulder bag, and she's really short. I'm 5'10", she's 5'1", and so if we walk … anywhere we walked I'd have my hand on the strap of her shoulder bag like she was my guide dog and … but we got so used to doing it, because we do a lot of stuff together like we hang out together a lot," (Case 1, Female, aged 24, Fall). "I kept talking to me mum and that about it. Told her … I like talking to me mum about stuff and that. A lot of my friends kept ringing, asked how I was, which was nice. I knew I had like support and that. But I just really stayed in and just went down work when I had to and just tried to get on with it and tried to stay positive about it and just, you know, try to be optimistic about things." (Case 13, Male, aged 19, Assault). In addition to the support patients received from family and close friends' circle, some patients also acknowledged the support they received in the work environment. They reported the importance of this support in overcoming the difficulties they faced during the period when they had a stressful workload. It is well acknowledged that social support for the traumatised individual has a positive influence on an individual's psychological well-being (Maercker and Hecker, 2016; Vanaken et al, 2021). "my bosses know that and I've got some help like and the other chefs are helping us, filling in and just making sure I'm doing alright. (Case 13, Male, aged 19, Assault). The environment influences coping with the injury and clinicians should try and ensure it is as supportive as possible to facilitate patients regaining confidence and minimising felt stigma. "[In hospital] everything's very safe, very protected both emotionally and physically. So, I haven't had to face a lot of the problems I might have faced in the outside world. ..... Being a patient here is very protected, yes. It's very different to being out amongst the general population and having to mix with people and different people all the time. You know, standing in a check-out queue with lots of other strangers and a stranger on the check-out and, you know, getting a bus and people on the bus sort of, 'what's she done to her eye?' sort of thing." (Case 5, Female, aged 48, Fall).

ISSN 6417-2310

The positive influence of time

The positive effect of time, in terms of coping, can be seen in the post-treatment period as it allows the patient to develop his coping methods with the injury complications. In this study, data shows that there is no time limit for coping with blow-out fractures concurring with similar findings in the literature (2004). It seems that the coping process starts as soon as the patient recovers from the "shock" of injury/assault, and realises that he/she does not have a choice but to accept and deal with the new situation. Coping processes are then established as the patient develops his mechanisms to deal with the outcome of trauma. "I coped as best as I could to be honest, it wasn't like … I just had to deal with it. When it first happened, I didn't deal with it too great because obviously like me face was … I looked like a completely different kid, me face was out here and it was just … like I was shocked when I first saw like the injury and that. But like I say you've just got to deal with it any way you can really." (Case 17, Male, aged 19, Assault). "Obviously you can get used to it, you adjust to anything. If you go into a wheelchair, you can get used to it. You can get used to anything if..... I've generated techniques to make it better. So, there's no one point where I thought right I've got to say "I've got to do this now to make it better." (Case 15, Male, aged 24, Sport injury). "It doesn't that really bother [me if I move my head while I am driving]. If you think about it, it probably did [at the beginning], but I'm so used to it now. I don't know how to say it. I mean like I said funny enough something minor it might go away. But obviously as it gradually" (Case 1, Female, aged 24, Fall). The interviews with blow-out fracture patients have shown that there are different ways of coping with this injury and its complications. Although most of the coping methods are patient-related mechanisms, it should be noted that successful surgery in terms of regaining an acceptable level of single vision (regaining confidence) and elimination of enophthalmos (satisfaction with appearance) have a major influence on patient ability to cope with the injury and its complication. Auerbach et al, (2008) also found that the extent of emotion-focused coping strategies was related to patients' satisfaction with facial appearance. Bury, (1982) suggested that illness itself represents a type of disruptive event. Accordingly, patients with illnesses conceptualise their lives as two halves, before and after the onset of the illness. The coping process, on the other hand, try to bridge that break in life continuity. It would seem based on our data that orbital blow-out fractures might have a similar disruptive effect as illness, especially as some of the results of the fracture such as diplopia and or enophthalmos are long-lasting (chronic) and therefore have to be managed similarly to a chronic illness, as the following quote shows; "I shouldn't beat myself up about it. I look at the positive things that I'm still here. .... just trying to get myself better rather than get myself hooked up in thinking about it all the time." (Case 16, Male, aged 24, Assault). The quote above reflects an attempt at «Normalisation», in which the patient is trying to avoid the psychological «bracketing» of the impact of the illness (Bury 1991) and trying to continue with life as far as possible as before. The process of normalization might be accumulative. It develops "broaden-and-build", and this is achieved when coping skills improve with time (Friedman, 2007). "Although, physically it's [diplopia] likely not to improve, I think that my brain must be doing all sorts of amazing things that I'm unaware of to cope with it, to compensate for it and find ways around it. Because I'm finding that I'm aware of it less and less and I think that over time, after about a month I… didn't had to have had my eye covered or I couldn't see. Which sounds weird but, yeah." (Case 1, Female, aged 24, Fall). Figure 1 summarises the study findings. Knowledge about the trauma, treatment, social support, and returning to work might contribute to regaining confidence after a blow-out fracture. This in turn could help the patients in their psychological coping strategies.

Conclusion

Coping psychologically with the consequences

ISSN 6417-2310

of orbital blow-out fracture seems to be achieved through patients' ability to regain their confidence. The passage of time after treatment plays a positive role in this respect.

Conflict of interest

We are the author's (F. Alhamdani, I. Corbett, and J. Durham) state that the manuscript for this paper is original, and it has not been published previously and is not under consideration for publication elsewhere, and that the final version has been seen and approved by all authors.

References

Aldwin CM, Yancura LA. 2004. Coping and health: A comparison of the stress and trauma literatures. Trauma and health: Physical health consequences of exposure to extreme stress. American Psychological Association. https://doi.org/10.1037/10723-005

Alhamdani F. 2020. A short guide to dental studies for dental researchers. Republic of Moldova: Scholars› Press.

Alhamdani F, Corbett I, Durham J. 2016. "Is my eyesight gone?" patient perspectives of orbital blow-out fractures. JODR. 3(1):8-19, https://doi.10.12816/0028203

Auerbach SM, Laskin DM, Kiesler DJ, Wilson M, Rajab B, Campbell TA. 2008. Psychological factors associated with response to maxillofacial injury and its treatment. J Oral Maxillofac Surg. 66(4):755-761. https://doi.org/10.1016/j.joms.2007.12.006

Bury M. 1982. Chronic illness as biographical disruption. Sociol Health Illn. 4(2):167-182, https://doi.org/10.1111/1467-9566.ep11339939

Bury M. 1991. The sociology of chronic illness: A review of research and prospects. Soctology of Health Si Illness, J Sociology of health &illness 13(4), https://doi.org/10.1111/j.1467-9566.1991.tb00522.x

Bury M. 2002. Sociological theory and chronic illness: Current perspectives and debates Österreichische Zeitschrift für Soziologie 27(4):7-22, https://doi.org/10.1007/s11614-002-0017-0

Carlson EB. 1997. Common responses to traumatic experiences. In: Carlson EB, editor. Trauma assessments, a clinician›s guide. New York: The Guilford Press.

Carver CS. 2007. Stress, coping, and health. In: Friedman HS, Silver RC, editors. Foundation of health and psychology. New York: Oxford University Press.

Charmaz K. 1983. Loss of self: A fundamental form of suffering in the chronically ill. Sociol Health Illn. 5(2):168-195. https://doi.org/10.1111/1467-9566.ep10491512

Converse JM, Smith B. 1957. Enophthalmos and diplopia in fractures of the orbital floor. Br J Plast Surg. 9(4):265-274. https://doi.org/10.1016/S0007-1226(56)80050-7

Coulter A, Parsons S, Askham J. 2008. Where are the patients in decision-making about their own care? Denmark: WHO Regional Office for Europe.

Coulter I, Frewin S, Krassas GE, Perros P. 2007. Psychological implications of graves› orbitopathy. Eur J Endocrinol. 157(2):127-131. https://doi.org/10.1530/EJE-07-0205

De la Fuente J, Mañas I, Franco C, Cangas AJ, Soriano EJIjoer, health p. 2018. Differential effect of level of self-regulation and mindfulness training on coping strategies used by university students. 15(10):2230. https://doi.org/10.3390/ijerph15102230

Falvo D. 2005. Medical and psychosocial aspects of chronic illness and disability. Third Edition ed.

ISSN 6417-2310

Mississauga: Jones and Bartlett Publishers.

Friedman HS. 2007. Personality, disease, and self-healing. In: Friedman HS, Silver RC, editors. Foundations of health psychology. New York: Oxford University Press.

Gibbs GRJAqd. 2007. Thematic coding and categorizing. 703:38-56.

Glaser BG, Strauss ALJABS. 1965. Discovery of substantive theory: A basic strategy underlying qualitative research. 8(6):5-12.

Glynn SM, Asarnow JR, Asarnow R, Shetty V, Elliot-Brown K, Black E, Belin TR. 2003. The development of acute post-traumatic stress disorder after orofacial injury: A prospective study in a large urban hospital. J Oral Maxillofac Surg. 61(7):785-792. https://doi.org/10.1016/S0278-2391(03)00239-8

Horn ERV. 2009. Psychological response to trauma. Professional Case Management. 14 (2):66–73.

Hull AM, Lowe T, Devlin M, Finlay P, Koppel D, Stewart AM. 2003. Psychological consequences of maxillofacial trauma: A preliminary study. Br J Oral Maxillofac Surg. 41(5):317-322. https://doi.org/10.1016/S0266-4356(03)00131-1

Ito M, Matsushima EJCmhj. 2017. Presentation of coping strategies associated with physical and mental health during health check-ups. 53(3):297-305. https://doi.org/10.1007/s10597-016-0048-9

Lazarus RS. 1993. Coping theory and research: Past, present, and future. Psychosom Med. 55(3):234-247.

Leventhal EA, Contrada RJ. 1998. Self-regulation, health, and behavior: A perceptual-cognitive approach. Psychology & Health 13(4):717 — 733, https://doi.org/10.1080/08870449808407425

Leventhal EA, Leventhal H, Shacham S, Easterling DV. 1989. Active coping reduces reports of pain from childbirth. J Consult Clin Psychol. 57(3):365-371. https://doi.org/10.1037/0022-006X.57.3.365

Maercker, A., & Hecker, T. (2016). Broadening perspectives on trauma and recovery: a socio-interpersonal view of PTSD. European journal of psychotraumatology, 7, 29303. https://doi.org/10.3402/ejpt.v7.29303.

Mechanic D. 1995. Sociological dimensions of illness behavior. Soc Sci Med. 41(9):1207-1216. https://doi.org/10.1016/0277-9536(95)00025-3

Olff M, Langeland W, Gersons BP. 2005. The psychobiology of ptsd: Coping with trauma. Psychoneuroendocrinology. 30(10):974-982. https://doi.org/10.1016/j.psyneuen.2005.04.009

Paterson BL. 2001. The shifting perspectives model of chronic illness. J Nurs Scholarsh. 33(1):21-26. https://doi.org/10.1111/j.1547-5069.2001.00021.x

Ritchie J, Lewis J, Nicholls CM, Ormston R. 2013. Qualitative research practice: A guide for social science students and researchers. sage.

Rowe F. 2000. Glossary. In: Rowe F, editor. Clinical orthoptics. First edition Reprinted ed.:Blackwell Science Ltd.

Sippel LM, Pietrzak RH, Charney DS, Mayes LC, Southwick SMJE, Society. 2015. How does social support enhance resilience in the trauma-exposed individual? 20(4). http://dx.doi.org/10.5751/ES-07832-200410

Sullivan TJ, Kraft SP, Burack C, O›Reilly C. 1992. A functional scoring method for the field of binocular single vision. Ophthalmology. 99(4):575-581. https://doi.org/10.1016/S0161-6420(92)31931-1

ISSN 6417-2310

Tedeschi RG, Calhoun LG. 1996. The posttraumatic growth inventory: Measuring the positive legacy of trauma. J Trauma Stress. 9(3):455-471. https://doi.org/10.1007/BF02103658

Thomas C. 2004. How is disability understood? An examination of sociological approaches. Disability & Society. 19(6):569-583. https://doi.org/10.1080/0968759042000252506

Tuval-Mashiach R, Freedman S, Bargai N, Boker R, Hadar H, Shalev AY. 2004. Coping with trauma: Narrative and cognitive perspectives. Psychiatry. 67(3):280-293.

Vanaken L, Smeets T, Bijttebier P, Hermans DJFiP. 2021. Keep calm and carry on: The relations between narrative coherence, trauma, social support, psychological well-being, and cortisol responses. 12:20. https://doi.org/10.3389/fpsyg.2021.558044

ISSN 6417-2310