

## The Effect of Cognitive Behavioural Psychotherapy Programs on Reducing Social Anxiety Symptoms among Vitiligo Patients

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### Abstract

This study aims to examine the effect of a cognitive-behavioral psychotherapy program on reducing social anxiety symptoms among vitiligo patients. The semi-experimental approach was used with 24 participants (12 males and 12 females) who suffered from social anxiety and were divided into 12 experimental and 12 control groups; their primary diagnosis was determined using the DSM-5 through an initial interview. The participants were selected from dermatology clinics with an age range of 20 to 35 years. The cognitive-behavioral therapy program consists of nine sessions, and the participant's social anxiety levels were evaluated using Peters' social anxiety scale. Findings showed a clear difference in means between the experimental and control groups, as well as a statistically significant difference between the experimental and control groups in the post-test social anxiety, where the modified mean of the experimental group was less than the modified mean of the control group ( $F = 57.15$  and  $Sig = 0.00$ ). Another evidence point that supports the effects of the treatment program is the value of significant size (55%). Finally, no statistical significance was found in the experimental group's post-test and subsequent testing.

**Keywords:** cognitive behavioural, psychotherapy program, social anxiety, vitiligo, patients.

### Background

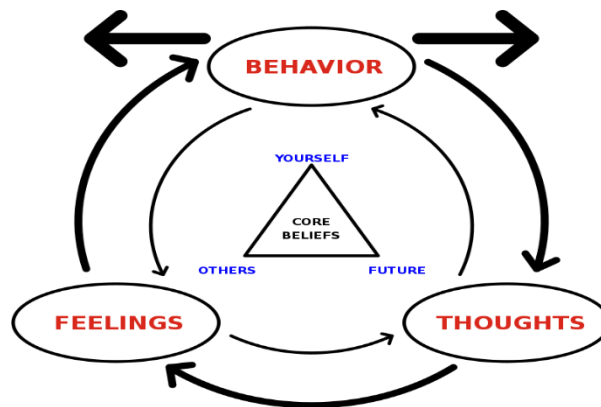
Vitiligo is a condition that leads to patches of fading colour of patients' skin; stained marks which can get bigger and bigger through passage of time. Vitiligo as a disease may influence different parts of the skin. Vitiligo may also cause hair damage and dry lips (Anaba and Oaku, 2020). Melanin is the substance that is generally blameable for the acquired colour of hair and skin. Vitiligo grows when melanin-producing cells deacease or stop working. Even though vitiligo may influence different types and colours of skin, it is more noticeable in individuals with dark or black skin. However, vitiligo as a health condition is not considered fatal or infectious but it may cause some stress or anxiety for the patients. or it can make patients feel horrible about themselves (Osinubi et al., 2018). Mental health is poor in vitiligo patients, resulting in a considerable deterioration in their living conditions (Aghaei et al, 2004). Vitiligo has a significant influence on patients' quality of life; many feel ostracized as a result of their ailment (Mechri et al, 2006). It also has a significant influence on patients, since many feel ashamed by their disease (Mechri et al, 2006).

#### Cognitive-behavioural psychotherapy

Central to cognitive-behavioural therapy (CBT) stimulating and modifying any obstructive cognitive falsifications, ideas, beliefs or attitudes. It further aims at enhancing emotional regulation and increasing personal surviving tactics that might be needed to resolve any emerging problems (Agras & Bohon, 2021; Beck, 2011). Cognitive-behavioural psychotherapy was mainly designed to deal with depression. However, its usage has been extended to incorporate the treatment of different mental health disorders, comprising anxiety (David et al., 2018). CBT consists of several cognitive or behavioural psychotherapies that handle certain mental ailments by utilising evidence-based methods and techniques. CBT has been built upon a mixture of the main principles from behavioural and cognitive psychology (Jones et al., 2018). It is suggested that CBT varies from the historical approaches to psychotherapy, including the psychoanalytic method, in which the therapist looks for the insensible meaning behind the behaviours or practices before coming up with a diagnosis. As an alternative, CBT is considered a problem-oriented and action-oriented way of therapy. That is CBT is employed to treat definite issues linked to a diagnosed mental health syndrome (Sauve et al., 2020).

The main duty of the therapist is to assist the patient discover and drill sufficient strategies to reach the intended planned aims and decrease any symptoms of the disorder. CBT is designed according to the fact that

intellectual abnormalities and maladaptive behaviours contribute significantly to the increase and repairs of mental illnesses. Furthermore, it is also related to the belief that the symptoms and accompanying distress can be eliminated by schooling the latest information-processing skills and managing strategies (Chiang et al., 2017). The illustration below shows how emotions, thoughts, and behaviours can have mutual impact. The triangle in the center of the diagram symbolises CBT's tenet that all individuals' main beliefs can be structured through using three classifications: "self, others, and future."



### Vitiligo

Vitiligo is a health state, which may cause patches of the skin mislaying its colorant. Through the passage of time, the yellowed spots normally expand. Many parts of the skin can be affected by the condition of vitiligo (Ezzedine et al., 2021). Vitiligo can further impact the patients' tongue and hair. Melanin frequently dominates the colour degree of our skin and hair. Vitiligo may occur and influence all the tones of skin, when the melanin-producing cells de cease or stop functioning. It is predicted that individuals who have dark or black complexion may suffer more noticeably than those with white complexion (Morrison et al., 2017). Nevertheless, vitiligo is not classified as an infectious or life-threatening disease. On the other hand, it may result in some levels of stress or embarrassment. The symptoms of vitiligo may incorporate faded skin color, which normally exhibits in spots on the hands, face, and areas close to body openings and the private parts. Besides, the signs include change of the colours of the patients' eyebrows, beard, eyelashes or head hair into premature grey or whitening colour, in addition to the clour damage mucosal membranes colour inside the oral cavity and the nasal cavity (Osinubi et al., 2018).

### Social anxiety

Social anxiety is perceived as a classic type of anxiety disorder. An individual characterized with social anxiety disorder may suffer from the symptoms of anxiety when they are faced with circumstances in which they are dissected, judged, or assessed by others. These situations may include speaking in public, meeting new persons, dating, taking part in a job interview, answering a question at class, or dealing with a cashier or a sales assistant (Maurage & Vanderhasselt, 2017). Individuals with vitiligo may feel nervous or petrified because of their worry or fear of being humiliated, criticised, or rejected. Moreover, performing daily activities such as eating food or drinking beverages in front others or using public toilets may further cause social anxiety (Pini et al, 2006).

People suffering from social anxiety disorder may practice devastating distress in public contexts because they think they are immobilised to control them. Other indivuals may find that such fear may inhibit them from the execution of daily missions such as going to work or school, or going shopping (Bienvenu & Ginsburg, 2007). However, others can perform some of these tasks, but with excessive anxiety and unease. Social anxiety disorder may have other consequences like feeling tension regarding any future social arrangements and occasions weeks in advance. They may sometimes avoid doing to places or situations which casue anguish or embarrassment (Lewis et al., 2012). There are several symptoms that individuals characterized with social anxiety disorder may acknowledge when they act in public or mingling with other people. These symptoms include redden face, sweating, trembling, inceased heart rate, blank mind, feeling unsettled, having a

stiff body posture, talking with an extremely soft voice, avoiding direct eye contact, avoiding being with unknown individuals, failing to interact with people social settings, expecting that people around will see them negatively (Salman et al., 2016).

### Previous studies

Revankar et al. (2022) summarize the research on the effectiveness of CBT in treating dermatological issues in patients to improve their quality of life and skin condition. The databases of PubMed and Google Scholar were searched for pertinent papers; thirty papers were considered in all, with ten on psoriasis, eleven on atopic dermatitis, four on vitiligo, four on acne, and one on alopecia areata. Results showed that the usefulness of CBT and Internet CBT for several dermatological diseases has been supported by numerous studies, including randomized controlled trials with sizable study populations. Tan et al. (2021) used meta-analysis to investigate the impact of cognitive behavior therapy on anxiety and depression in psoriasis patients. The researchers conducted separate screenings of papers, data extractions, and quality assessments of the chosen literature. Stata 14.0 was used to process all the data. Results showed that for anxiety and stress-related problems, "CBT is a successful, industry-standard treatment. Targeting unhelpful thoughts, feelings, and behaviors that have been found to cause and perpetuate anxiety requires the use of CBT approaches". Also, patients with anxiety disorders can benefit from CBT as a stand-alone therapy or in combination with conventional drugs.

Chiang et al. (2017) conducted a review and meta-analysis of the treatment outcomes of bipolar disorder patients treated with CBT and medication, comparing these results to those of patients who received conventional care alone. Their meta-analysis and systematic review used information from 19 RCTs that together included 1384 people with type I or type II bipolar disorder. The primary analysis showed that CBT could reduce relapse rates "(pooled OR = 0.506; 95% CI = 0.278–0.921) and improve depression symptoms ( $g = -0.494$ ; 95% CI =  $-0.963$  to  $-0.026$ ), manic severity ( $g = -0.581$ ; 95% CI =  $-1.127$  to  $-0.035$ ), and psychosocial functioning ( $g = 0.457$ ; 95% CI =  $0.106$ – $0.809$ )". In another study, Jha et al. (2016) developed a CBT program for psychological stress among people with vitiligo. The sample of the study consisted of 13 vitiligo patients older than 12 years. The researchers used breathing, relaxation, desensitization, exposure, psychoeducation, and self-statement for exposure and desensitization.

A dermatology resident who had received training in the application of cognitive behavior therapy from a clinical psychologist conducted five weekly sessions, with the first few sessions being overseen by the clinical psychologist. Participants in the study kept getting their regular vitiligo treatment. Patients kept daily mood diaries while in therapy. The Dermatology Life Quality Index and Skindex-16 were used to assess behavior and assess quality of life at three different times: at baseline, after the conclusion of five sessions, and seven weeks after therapy. A qualitative questionnaire called "a behavioral evaluation" prepared by the researchers is used to direct psychosocial therapy for specific patients. Patients were asked to list both positive and negative aspects of themselves, upsetting circumstances, coping mechanisms, and thoughts about their health. All participants had a reduction in the quality of their lives (dermatology life quality) at the end of five sessions. After five sittings, one patient had a non-significant drop in score, and the remaining participants' psychological stress did not change at the end of treatment. Studies on the efficacy of cognitive behavioral therapy for social anxiety disorder in people with vitiligo appear to be extremely scarce. Hence, the current study was distinguished from previous studies in that it developed a cognitive therapy program for social anxiety disorder among patients with vitiligo.

### Problem of the study

In recent years, a lot of attention has been paid to anxiety in vitiligo patients; individuals with vitiligo bear heavier stress. Furthermore, the existence of psychosocial comorbidities may significantly impact the vitiligo patient's life burden. However, there isn't enough evidence to evaluate vitiligo patients' mental health conditions. On the one hand, dermatologists typically People tend to focus on treating physical issues and diseases while ignoring any potential psychological side effects. Nonetheless, the most communal symptoms of social anxiety can encompass fast heartbeat, muscle stiffness, faintness, headache, stomach-ache, failure to catch

breath, and an "out-of-body" perception. Furthermore, people suffering for anxiety disorder will develop phobia from being negatively judged, embarrassed or disgraced in the absence of any cure.

Such feelings can contribute to self-pity, negative thoughts, poor social skills, depression, and sensitivity to criticism in vitiligo. Ezzedine et al. (2021) posit that numerous vitiligo patients have demonstrated that those who have the condition experience psychological distress, worry, sadness, and diminished self-esteem. The disorder of social anxiety has been successfully treated with cognitive behavioral therapy. "Medication for social anxiety disorder is recommended to help patients feel less anxious and uncomfortable. Although recovery times vary from person to person", individuals must follow the treatment plan. The current study aims to design a cognitive behavioral therapy program for social anxiety disorder treatment among Vitiligo patients.

### **Significance of the study**

Clarifying the psychological and behavioral traits of vitiligo patients and comprehending their potential psycho-behavioral symptoms, such as social anxiety disorder, can help improve vitiligo management, the effectiveness of treatment, patients' quality of life, and the development of their physical and mental health. Moreover, the current study is expected to present high-quality and evidence-based psychological advice on the effects of cognitive behavior therapy on social anxiety among vitiligo patients.

### **Aim of the study**

The study examines the suitability of a cognitive behavioral psychotherapy program for treating social anxiety disorder in vitiligo patients. Also, to reduce the symptoms of social anxiety disorder among patients with vitiligo. Moreover, the current study seeks to examine the following hypotheses:

1. There is a statistically significant difference at  $(0.05 \leq \alpha)$  in the means of the experimental and control groups in the post-test of the social anxiety scale.
2. There is no statistically significant difference at  $(0.05 \leq \alpha)$  in the means of the experimental group in the post-test and subsequent post-test of the social anxiety scale in favor of the continuity of the treatment program.

### **Methodology**

The semi-experimental approach was used based on the random assignment of two experimental and control groups to examine the impact of a cognitive behavioral therapy program and verify its results by comparing the two experimental and control groups. The study's sample consisted of 24 participants (12 male and 12 female) suffering from social anxiety. They were divided into two groups (12 experimental and 12 control group), and their primary diagnosis was determined using the DSM-5 through an initial interview. The participants were selected from dermatology clinics with an age range of 20 to 35 years.

### **Tools**

First, the participant's social anxiety levels were measured based on the social anxiety scale (Peters, 2000), which consists of 20 items. The scale validity and reliability have been compared to other scales that measure social anxiety; the results found a highly significant correlation ( $r = 0.83$ ,  $P < 0.01$ ) which suggests the scale presents similar constructs. The clinician-rated severity of social anxiety has also been shown to be moderately correlated with the scale scores.

Second, a cognitive-behavioral psychotherapy program: the program is based on behavioral theory and aims to reduce the symptoms of social anxiety disorder in vitiligo patients. It is a psychotherapeutic program and organized group training of the short-term type, designed to train groups of vitiligo patients within the age range of 20–35 years who have symptoms of social anxiety disorder on some behavioral methods to help them get rid of social anxiety, which is reflected in their personal and social lives according to the two considerations: This program is designed to be applied to patients with vitiligo whose scores are higher than the average on the social anxiety scale. Also, the preparation of the program was limited by the scientific, material, and time capabilities available to the researcher.

### ***Aims of the program***

The program aims to reduce social anxiety disorder among vitiligo patients and modify the wrong and illogical thinking styles of the participants. Moreover, help vitiligo patients overcome some of the psychological problems they face, including social anxiety and a low sense of meaning, in addition to transforming the behavioral theory into a psychotherapy program that can be used by institutions concerned with this category to mitigate the psychological and social effects resulting from vitiligo.

### ***Bases of the program***

- The general bases: the researchers took into account the respect for the rights of the vitiligo patients in choosing to participate in the program, the confidentiality and privacy of their problems, and the freedom to express their ideas and opinions within the framework of a positive relationship subject to the limits and ethics of psychotherapy and within the existential theory of psychotherapy.
- The psychological bases: what patients learn from information, skills, and techniques based on behavioral therapy and what changes their ideas about self-worth, whether through researchers or their own efforts affecting their lives, so researchers were keen to provide clear and simple information to patients so that they could understand the basis on which their lives were based, taking into account the individual differences between patients.
- The philosophical bases: the program is based on philosophical foundations, including that the search for meaning and ideas that the individual holds about himself plays an important role in determining the importance of existence; that each individual has his own idea of himself, which constitutes his philosophy that he adopts about himself and others; and about what happens to him from events in his life; that his view of himself plays a negative role in his psychological state and causes him to act ineffectively; and that in order to change the negative view of himself, it is necessary to modify the psychological state, specifically reducing anxiety, in order to have the individual assist him in making decisions and accept responsibility.
- The social bases: The researchers took into account the social aspect of the program in terms of caring for the individual as a member of a group, urging him to act in a way that expresses his life in the current apparent moment, respecting the feelings and rights of others, and pushing him to achieve balance in his social relationships outside the session to achieve more social interaction.

### ***Program content.***

The program consists of (9) sessions, including a treatment relationship-building session and a treatment program introduction. (8) sessions to reduce social anxiety among the participants. The sessions were conducted twice a week, and the times of the sessions were between 50 and 60 minutes.

### ***Techniques***

The program used behavioral therapy techniques to achieve the program's objectives, including open discussion, self-evaluation, homework, "identifying automatic ideas and correcting them, imagery to get back the emotive experience, self-monitoring, the cognitive continuum, direct dialogue, exposure, imagination, role play, and systematic desensitization".

### ***Sessions***

#### ***Session one: building a treatment relationship.***

- Objectives: to establish an acquaintance between the participants and achieve familiarity between the psychologist and the group. Also, the participants should recognize the importance of the program and the session date and time.
- Method and activities: brainstorming, encouragement, and empathy.
- Duration time: 50 min.

***Session two: the concept of social anxiety (symptoms and effects).***

- Objectives: explain the anxiety concepts and their causes, positive and negative effects, and types. In addition to its social, psychological, mental, and physical results.
- Method and activities: debate, discussion, and dialogue
- Duration time: 50 min.

***Session three: Muscle relaxation strategy training.***

- Objectives: master relaxation, calm, and emotional balance skills, also, raises the level of reassurance and psychological security among participants. In addition, it improves some physiological and cognitive functions (sleep, mood, logical thinking).
- Method and activities: discussion, lecture, dialogue, modeling, and practicing.
- Duration time: 60 min.

***Session four: practicing muscle relaxation strategy.***

- Objectives: master the skills of muscle relaxation, calm, and emotional balance. also, spreading reassurance and psychological security among participants, in addition to participants learning about the importance and role of muscle relaxation in reducing anxiety and stress and improving sleep.
- Methods and activities include discussion, lecture, dialogue, modeling, training, and practicing.
- Duration time: 60 min.

***Session five: improve self-confidence and build self-esteem among the participants.***

- Objectives: to improve the self-confidence among the participants as a coping strategy to overcome and face the different social conditions and states.
- Method and activities: training on the steps of improving self-confidence, e.g., building a good, positive relationship; learning adjustment strategies, learning how to be assertive; and giving themselves a challenge.
- Methods and activities include discussion, lecture, dialogue, modeling, role-play training, and practicing.
- Duration time: 60 min.

***Session six: using the systematic desensitization strategies.***

- Objective: To reduce social anxiety and stress among participants by gradually exposing them to a variety of anxious situations, teaching them self-control and emotional balance in various social situations, and teaching them a new coping strategy to help them face a variety of social situations.
- Discussion, lecture, dialogue, modeling, role-play training and practice, and PowerPoint presentation are some of the methods and activities used.
- Duration time: 60 min.

***Session seven: cope the social anxiety by distract strategies.***

- Objectives: to reduce overestimation of the probabilities of a social situation or event and train on some techniques and strategies used to distract attention during exposure to a social situation or event.
- Methods and activities include discussion, lecture, dialogue, modeling, and practicing a PowerPoint presentation, and social anxiety can distract from strategies.
- Duration time: 50 min.

***Session eight: cope with the social anxiety by replacing negative thoughts with positive ones.***

- Objectives: To train participants how to cope with social anxiety and how to deal with negative thoughts and replace them with positive ones.
- Methods and activities: identify the ineffective, misguided methods.
- Duration time: 50 min.

***Session nine: finishing and conclusion.***

- Objectives: identify the opinions of the participants in the treatment program and its sessions and benefits. And applying the social anxiety scale (Peters, 2000).
- Duration time: 50 min.

### Program evaluation

The program has been evaluated through presentations to professionals in psychotherapy. The professional comments and feedback were considered in order to modify and edit the session. Later, the professional agreed that the program was clear and suitable for the study's purpose.

### Findings and discussion

Hypothesis one: There is a statistically significant difference ( $0.05 \leq \alpha$ ) in the means of the experimental and control groups in the post-test of the social anxiety scale. To examine the hypothesis Means, modified means, standard error, and standard deviation were calculated as illustrated in below Table (1).

Table 1: Means, modified means, standard error, and standard deviation.

Scale	Groups	Means	SD	Modified Means	Standard Error
Social Anxiety	Experimental	3.01	0.78	2.97	0.11
	Control	3.55	0.84	3.58	0.13

Results in table (1) showed a clear difference in means between the experimental and control groups; the modified mean and standard error of the experimental group are 2.97 and 0.11, respectively. In relation to the control group, the modified mean was 3.58 and the standard error was 0.13. To find out whether there are statistically significant effects between the two groups, the MANCOVA test has been calculated as indicated in table 2.

Table 2: MANCOVA test for the difference in the corrected total of two groups in post-test.

Contrast source	Sum of squares	df	Mean of sum of squares	F	Sig	Sig. size
pre-test	4.34	1	4.34	57.15	0.00	0.55
groups	2.021	1	0.074			
Error	235.16	21				
total	6.87	24				
corrected total	4.34	23				

significant at ( $0.05 \leq \alpha$ )

Table (2) presented a statistically significant difference between the experimental and control groups in the post-test pf social anxiety. Where the modified mean of the experimental group is less than the modified mean of the control group ( $F = 57.15$  and  $Sig = 0.00$ ). Another evidence point that supports the effects of the treatment program is the value of significant size (55%).

Hypothesis two: There is no statistically significant difference ( $0.05 \leq \alpha$ ) in the means of the experimental group in the post-test and subsequent post-test of the social anxiety scale in favor of the continuity of the treatment program. To examine the hypothesis, the social anxiety scale has been applied to the experimental group one month after the end of the program, in addition to a paired-sample t-test that has been calculated. As presented in table (3).

Table 3: Paired-Sample t-test to examine the difference in means of experimental groups and pursuing.

Test	Means	Standard deviation	df	t	Sig
post-test	2.42	0.35	11	0.87-	0.38
pursing- test	2.45	0.32	11		

significant at ( $0.05 \leq \alpha$ )

Table (3) revealed no statistically significant differences between the experimental group's post-test and subsequent test, where the t value was -0.87 and the sig = 0.38.

The current study was designed to examine the effect of a cognitive behavioral therapy program on reducing social anxiety disorder among vitiligo patients. 24 vitiligo patients were divided into two groups: 12

experimental patients and 12 control patients. Contains nine sessions, including a treatment relationship-building session and an introduction to the treatment program. (8) sessions to reduce social anxiety among the participants. The sessions were conducted twice a week, and the times of the sessions were between 50 and 60 minutes. The study's findings revealed a clear difference in the means of the experimental and control groups, with the modified means and standard error of the experimental group being 2.97 and 0.11, respectively. In relation to the control group, the modified mean was 3.58 and the standard error was 0.13. Also, there was a statistically significant difference between the experimental and control groups in post-test of social anxiety. Where the modified mean of the experimental group is less than the modified mean of the control group ( $F = 57.15$  and  $Sig = 0.00$ ). Another evidence point that supports the effects of the treatment program is the value of significant size (55%). Finally, no statistical significance was found in the experimental group's post-test and subsequent testing.

Chiang et al., (2017), Jha et al., (2016), and Tan et al., (2021) indicate that the vitiligo patients suffer from a high level of mental health problems in general and social anxiety disorder due to the negative consequences and effects they are exposed to resulting from the vitiligo disease and the inferior social view, which plays a role in the level of social anxiety. Most researchers recommend that providing treatment programs is an urgent need for vitiligo patients to improve and enhance their mental health. They also need to work to reduce the level of social anxiety and teach and train them on psychological counseling methods and techniques that help them adapt to and deal with life and its various requirements (Revankar et al., 2022; Tan et al., 2021).

Findings can be attributed to the therapeutic program and its contents, including techniques and therapeutic activities that contributed to increasing the participants' awareness, skills, and techniques for coping with social anxiety and its effects. For social anxiety and stress-related problems, CBT is a successful, industry-standard treatment. Targeting unhelpful thoughts, feelings, and behaviors that have been found to cause and perpetuate anxiety requires the use of CBT approaches. CBT can be used as a stand-alone treatment, in conjunction with conventional drugs (such as selective serotonin reuptake inhibitors) to treat individuals with anxiety disorders, or in conjunction with innovative therapies (e.g., mindfulness).

Additionally, the prospective recipients of such cure are flexible. Overall, cognitive-behavioural therapy (CBT) workers are counselled to initiate a set of treatment to actively handle the mentioned symptoms and problems every time a patient is suffering from emotional psychopathology (e.g., an anxiety or depression disorder) or upsetting feelings that do not match the disorder benchmark. This can help mitigate the anxiety that may intervene in the daily tasks. The results of this study are in harmony with those obtained by Chiang et al. (2017), Jha et al. (2016), and Tan et al. (2021), advocated that during the cure of anxiety disorders, CBT is believed to offer sufficient influence. CBT can be recommended for persons with anxiety disorders who are getting psychotherapeutic treatment. CBT is largely interrelated to fewer anxiety symptoms within twelve months of the completion of treatment as matched to the control conditions.

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