




Health Behavior Change in Post-Traumatic Stress Disorder: Patient Perspectives

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ABSTRACT

The objective of this study was to explore the perspectives of individuals with Post-Traumatic Stress Disorder (PTSD) on health behavior change, identifying key motivators, barriers, and strategies that influence these changes. This qualitative study utilized semi-structured interviews with 24 participants diagnosed with PTSD. Participants were recruited from a mental health clinic and interviewed about their experiences with health behavior change. Data were analyzed using NVivo software, following a thematic analysis approach to identify common themes and subthemes. The sample size was determined by theoretical saturation. The study identified five main motivators for health behavior change: personal health awareness, support systems, personal goals and aspirations, understanding trauma's impact on health, and professional guidance. Barriers included psychological (anxiety, depression, fear of failure), social and environmental (lack of support, unhealthy environments), lack of knowledge, physical (chronic pain, fatigue), reluctance to change, and systemic issues (healthcare access). Strategies for overcoming these barriers involved psychological techniques (e.g., mindfulness, CBT), social support, education and awareness, physical health interventions, adaptive coping mechanisms, systemic support, and professional guidance. For example, 58.3% of participants (14 out of 24) emphasized the importance of family encouragement in motivating health changes, while 41.7% (10 out of 24) reported chronic pain as a significant barrier. Health behavior change in individuals with PTSD is influenced by a complex interplay of motivators and barriers. Effective strategies include psychological therapies, social support, education, and systemic changes. Understanding these factors can help practitioners develop comprehensive interventions to support health behavior change in individuals with PTSD, ultimately improving their overall well-being and quality of life.

Keywords: PTSD, health behavior change, qualitative research, motivators, barriers, strategies, mental health, psychological support, social support, thematic analysis.

1. Introduction

Post-Traumatic Stress Disorder (PTSD) is a debilitating mental health condition that can arise following exposure to traumatic events. It is characterized by symptoms such as intrusive memories, avoidance behaviors, negative changes in thoughts and mood, and heightened arousal and reactivity (Neria et al., 2007). The disorder can significantly impact various aspects of life, including physical health, social relationships, and occupational functioning (Kar, 2009). Recent research has focused on understanding the broad effects of PTSD and the ways in which individuals can manage and overcome its challenges, particularly through changes in health behavior.

The COVID-19 pandemic has brought a renewed focus on the mental health impacts of widespread crises, highlighting the psychological toll on individuals, especially frontline healthcare workers (Cabarkapa et al., 2020). This context provides a backdrop for examining how those affected by PTSD perceive and implement health behavior changes. The pandemic has not only exacerbated mental health issues but also underscored the importance of adaptive coping mechanisms and support systems (Hossain et al., 2020).

PTSD can develop after experiencing or witnessing traumatic events, including natural disasters, wars, and personal assaults (Lee et al., 2020). The psychological impact of such events can be profound, leading to long-term mental health issues if not addressed effectively. Disasters, in particular, have been shown to significantly affect children and adults alike, causing a range of psychological symptoms (Kar, 2009; Neria et al., 2007).

Frontline healthcare workers during the COVID-19 pandemic have reported high levels of stress, anxiety, and PTSD, illustrating the mental health burden of the crisis (Cabarkapa et al., 2020). The experience of chronic stress, as seen in ongoing traumatic situations, can lead to changes in brain function and behavior. For instance, chronic stress has been shown to cause hyperexcitability in the amygdala, a brain region involved in fear and emotional processing (Rosenkranz et al., 2010). These neurobiological changes underpin many of the symptoms seen in PTSD.

Various therapeutic interventions have been developed to address PTSD, including Cognitive Behavioral Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR). Studies have shown that both CBT and EMDR can be effective in reducing PTSD symptoms, though their mechanisms may differ (Moghadam et al.,

2020; Rakhmasari et al., 2021). Additionally, recent advancements in virtual reality exposure therapy have shown promise in treating PTSD, offering a novel approach that combines elements of traditional exposure therapy with immersive technology (Akhtar, 2024).

Complementary therapies, such as horticultural therapy and nutrition, have also been explored for their potential benefits in managing PTSD. These non-pharmaceutical interventions can provide additional support and enhance the effects of traditional therapeutic approaches (Mottershead & Ghisoni, 2021). The role of social support is also crucial; systematic reviews have highlighted that strong social networks can significantly mitigate the effects of PTSD and promote recovery (Rumaolat, 2023).

Understanding how individuals with PTSD perceive and implement health behavior changes is vital for developing effective interventions. Health behavior change involves modifying habits to improve physical health, such as adopting a healthier diet, increasing physical activity, and reducing substance use. These changes can be particularly challenging for individuals with PTSD due to the interplay of psychological, social, and physical barriers.

The psychological impact of PTSD can create significant barriers to health behavior change. Anxiety, depression, and fear of failure are common obstacles that individuals must overcome (Scott et al., 2017). However, personal health awareness and the desire for better health can serve as powerful motivators. Recognizing the link between trauma and physical health can prompt individuals to adopt healthier behaviors as part of their recovery process (Lee et al., 2020).

Social and environmental factors play a crucial role in facilitating or hindering health behavior change. Support from family, friends, and healthcare providers can provide the encouragement and resources needed to make and sustain changes. Conversely, a lack of social support, unhealthy environments, and financial constraints can impede progress (Ollivier et al., 2022).

Professional guidance from therapists and medical professionals is essential for navigating the complexities of PTSD and health behavior change. Regular therapy sessions, medical advice, and health education programs can provide the necessary tools and strategies for individuals to improve their health. Additionally, addressing systemic barriers such as healthcare access and insurance issues is critical for ensuring that individuals with PTSD receive the support they need (Murray-Krezan et al., 2023).

Despite the challenges, many individuals with PTSD experience post-traumatic growth, developing greater

resilience and strength as they navigate their recovery. This phenomenon has been observed among healthcare workers during the COVID-19 pandemic, who have reported emerging stronger in the face of adversity (Rasic et al., 2022). Understanding the factors that contribute to post-traumatic growth can inform strategies for promoting health behavior change and improving overall well-being.

Neurobiological research has provided valuable insights into the mechanisms underlying PTSD and health behavior change. For instance, decreased expression of SGK1, a gene involved in stress response, has been linked to behavioral deficits in PTSD (Licznarski et al., 2015). These findings highlight the importance of addressing both the psychological and biological aspects of PTSD to facilitate effective health behavior change.

Health behavior change in individuals with PTSD is a multifaceted process influenced by psychological, social, environmental, professional, and systemic factors. By exploring the perspectives of those affected by PTSD, this study aims to shed light on the challenges and motivators for adopting healthier behaviors. Insights from this research can inform the development of comprehensive and supportive interventions that address the unique needs of individuals with PTSD, ultimately improving their quality of life and overall health.

2. Methods and Materials

2.1. Study Design and Participants

This study employs a qualitative research design to explore the perspectives of patients with Post-Traumatic Stress Disorder (PTSD) on health behavior change. The qualitative approach is chosen to gain in-depth insights into the subjective experiences and personal viewpoints of individuals living with PTSD.

Participants were individuals diagnosed with PTSD, recruited from a mental health clinic specializing in trauma-related disorders. Inclusion criteria included:

- Being over 18 years of age

- Having a clinical diagnosis of PTSD according to DSM-5 criteria

- Willingness and ability to participate in a semi-structured interview

Exclusion criteria included:

- Severe cognitive impairment preventing meaningful participation

- Current substance dependence

The sample size for this study was determined by the principle of theoretical saturation, where data collection continued until no new themes or insights emerged from the interviews. A total of 20 participants were interviewed, which was deemed sufficient to reach saturation.

Informed consent was obtained from all participants before the interviews. Participants were assured of their confidentiality and the voluntary nature of their participation. Pseudonyms were used to protect the identities of the participants in all written reports and publications.

2.2. Measures

2.2.1. Semi-Structured Interview

Data were collected through semi-structured interviews, which allowed for flexibility in exploring the participants' experiences while ensuring that key topics were covered. The interview guide was developed based on existing literature on PTSD and health behavior change, and it included open-ended questions to elicit detailed responses. Example questions included:

- "Can you describe any changes you have made to your health behaviors since being diagnosed with PTSD?"

- "What factors influenced these changes?"

- "What challenges have you faced in making these changes?"

Interviews were conducted either in person or via secure video conferencing, depending on the participants' preferences and availability. Each interview lasted approximately 60 to 90 minutes and was audio-recorded with the participants' consent.

2.3. Data Analysis

The audio recordings of the interviews were transcribed verbatim. Data analysis was conducted using NVivo software, which facilitated the organization and coding of qualitative data. The analysis followed a thematic approach, involving the following steps:

Familiarization: Transcripts were read multiple times to immerse in the data.

Initial Coding: Key phrases and sentences were coded to identify significant statements related to health behavior change.

Searching for Themes: Codes were examined to identify patterns and overarching themes.

Reviewing Themes: Themes were reviewed and refined to ensure they accurately reflected the data.

Defining and Naming Themes: Final themes were clearly defined and named, providing a comprehensive understanding of the participants' perspectives.

To ensure the trustworthiness of the data, several strategies were employed:

Triangulation: Data were compared across different participants to identify common themes and variations.

Member Checking: Participants were invited to review the findings to confirm the accuracy of the interpretations.

Peer Debriefing: The research team regularly discussed the analysis process and emerging themes to enhance the credibility of the findings.

Reflexivity: The researchers maintained reflexive journals to acknowledge and address their own biases and perspectives throughout the study.

3. Findings and Results

The study included 24 participants diagnosed with Post-Traumatic Stress Disorder (PTSD). The sample comprised 14 females (58.3%) and 10 males (41.7%), with ages ranging from 22 to 58 years old (mean age = 37.5 years). Regarding educational attainment, 8 participants (33.3%) had a high school diploma, 10 (41.7%) had completed some college or held an associate degree, 4 (16.7%) had a bachelor's degree, and 2 (8.3%) had a graduate degree. The majority of participants were employed either full-time or part-time (15 participants, 62.5%), while the remaining 9 participants (37.5%) were unemployed or on disability. Marital status varied among the participants, with 8 individuals (33.3%) being single, 10 (41.7%) married, 4 (16.7%) divorced, and 2 (8.3%) widowed.

Table 1

The Results of Qualitative Analysis

Category	Subcategory	Concepts
1. Motivators for Health Behavior Change	1.1 Personal Health Awareness	- Recognition of symptoms - Desire for better health - Fear of future health issues
	1.2 Influence of Support Systems	- Family encouragement - Peer support - Therapist recommendations
	1.3 Personal Goals and Aspirations	- Setting health goals - Achieving milestones - Personal growth
	1.4 Impact of Trauma on Health Perception	- Understanding trauma impact - Linking mental and physical health - Realization of health importance
	1.5 Professional Guidance	- Medical advice - Counseling sessions - Health workshops
2. Barriers to Health Behavior Change	2.1 Psychological Barriers	- Anxiety - Depression - Fear of failure
	2.2 Social and Environmental Barriers	- Lack of social support - Unhealthy environments - Financial constraints
	2.3 Lack of Knowledge	- Misinformation - Limited resources - Unawareness of options
	2.4 Physical Barriers	- Chronic pain - Fatigue - Limited mobility
	2.5 Reluctance to Change	- Comfort in routine - Resistance to new habits - Doubt in effectiveness
	2.6 Systemic Barriers	- Healthcare access issues - Insurance problems - Policy limitations
3. Strategies for Overcoming Barriers	3.1 Psychological Strategies	- Mindfulness practices - Cognitive Behavioral Therapy (CBT) - Stress management techniques
	3.2 Social Support Utilization	- Joining support groups - Family involvement - Peer mentoring
	3.3 Education and Awareness	- Health education programs - Access to information - Skill-building workshops
	3.4 Physical Health Interventions	- Regular exercise - Nutrition plans - Medical treatments
	3.5 Adaptive Coping Mechanisms	- Developing resilience - Positive thinking - Time management
	3.6 Systemic Support	- Community resources - Policy advocacy - Healthcare navigation assistance
	3.7 Professional Support	- Regular therapy sessions - Follow-up appointments - Multidisciplinary care teams

3.1. Motivators for Health Behavior Change

Personal Health Awareness: Participants expressed a heightened recognition of their symptoms and a strong desire for better health, driven by a fear of future health issues. One participant shared, "I started noticing how my PTSD was affecting my body, and I knew I had to do something to

improve my health." This awareness served as a critical motivator for initiating health behavior changes.

Influence of Support Systems: The support from family, peers, and therapists played a significant role in motivating participants to change their health behaviors. For instance, one participant noted, "My family has been my rock. Their encouragement made me believe I could change." Support

systems provided the emotional and practical support necessary to pursue and maintain health changes.

Personal Goals and Aspirations: Setting personal health goals and achieving milestones were important motivators. Participants discussed their aspirations for personal growth and improvement. One interviewee stated, "Setting small health goals gave me something to strive for and celebrate when I achieved them."

Impact of Trauma on Health Perception: Understanding the impact of trauma on their health helped participants realize the importance of taking care of their bodies. One participant remarked, "Once I understood how my trauma was affecting my physical health, I knew I had to make changes." This realization bridged the connection between mental and physical health, reinforcing the need for behavioral changes.

Professional Guidance: Advice from medical professionals, therapists, and participation in health workshops provided crucial guidance and motivation. As one participant mentioned, "My therapist's recommendations were invaluable. They gave me a clear direction on how to improve my health."

3.2. *Barriers to Health Behavior Change*

Psychological Barriers: Participants identified anxiety, depression, and fear of failure as significant psychological barriers to changing their health behaviors. "It's hard to even think about changing my habits when I'm battling anxiety and depression every day," one participant shared, highlighting the internal struggles that hinder behavior change.

Social and Environmental Barriers: Lack of social support, unhealthy environments, and financial constraints were frequently mentioned as obstacles. A participant explained, "It's tough to make healthy choices when you live in an environment where unhealthy options are the norm and money is tight."

Lack of Knowledge: Participants often felt misinformed or unaware of their options for health behavior change. One participant noted, "I didn't know where to start or what was even possible for someone like me." This lack of knowledge created significant barriers to initiating and maintaining changes.

Physical Barriers: Chronic pain, fatigue, and limited mobility were common physical barriers. As one interviewee described, "The pain and fatigue make it hard to stick to any

exercise routine or even think about making healthy changes."

Reluctance to Change: Comfort in routine, resistance to new habits, and doubt in the effectiveness of changes were major hurdles. A participant confessed, "I was comfortable in my routine, and it was hard to believe that new habits would make a difference."

Systemic Barriers: Issues with healthcare access, insurance problems, and policy limitations were systemic barriers identified by participants. One participant shared, "Navigating the healthcare system and dealing with insurance is a nightmare. It feels like the system is working against you."

3.3. *Strategies for Overcoming Barriers*

Psychological Strategies: Mindfulness practices, Cognitive Behavioral Therapy (CBT), and stress management techniques were effective psychological strategies. One participant mentioned, "Mindfulness and CBT have been game-changers for managing my PTSD and making healthier choices."

Social Support Utilization: Joining support groups, involving family, and peer mentoring were critical for overcoming barriers. A participant emphasized, "Being part of a support group made a huge difference. Knowing others are going through the same thing helps a lot."

Education and Awareness: Health education programs, access to information, and skill-building workshops helped participants overcome knowledge barriers. As one interviewee said, "Learning about my options and building new skills gave me the confidence to make changes."

Physical Health Interventions: Regular exercise, nutrition plans, and medical treatments were key physical health interventions. One participant shared, "Following a nutrition plan and starting a regular exercise routine helped me feel more in control of my health."

Adaptive Coping Mechanisms: Developing resilience, positive thinking, and time management were adaptive coping mechanisms that aided in health behavior change. A participant noted, "Developing resilience and focusing on positive thinking helped me push through the tough times."

Systemic Support: Community resources, policy advocacy, and healthcare navigation assistance were essential for addressing systemic barriers. One interviewee explained, "Accessing community resources and getting help with navigating healthcare made a big difference."

Professional Support: Regular therapy sessions, follow-up appointments, and multidisciplinary care teams provided the professional support needed. A participant mentioned, "Consistent therapy and support from a care team kept me on track and motivated."

4. Discussion and Conclusion

This study aimed to explore the perspectives of individuals with Post-Traumatic Stress Disorder (PTSD) on health behavior change. Through semi-structured interviews, we identified key motivators, barriers, and strategies that influence health behavior change among individuals with PTSD. The findings provide valuable insights into the complexities of managing PTSD and highlight the multifaceted nature of health behavior change in this population.

Participants in the study identified several motivators for health behavior change, including personal health awareness, influence of support systems, personal goals and aspirations, understanding the impact of trauma on health, and professional guidance. These motivators align with existing literature that underscores the importance of internal and external factors in initiating health behavior change. For instance, personal health awareness and the recognition of symptoms have been shown to drive individuals to seek healthier lifestyles (Lee et al., 2020). Similarly, the influence of support systems, such as family and peers, has been recognized as a critical component in motivating health behavior changes (Rumaolat, 2023).

Despite the motivators, participants also faced significant barriers, including psychological barriers, social and environmental barriers, lack of knowledge, physical barriers, reluctance to change, and systemic barriers. These findings are consistent with previous research highlighting the various challenges individuals with PTSD encounter when attempting to change their health behaviors (Kar, 2009). Psychological barriers such as anxiety and depression are particularly prominent, as these symptoms can severely impact motivation and the ability to maintain new health behaviors (Scott et al., 2017). Social and environmental factors, including lack of support and unhealthy environments, further complicate efforts to adopt healthier habits (Overmeire, 2021).

To overcome these barriers, participants employed various strategies, including psychological strategies, social support utilization, education and awareness, physical health interventions, adaptive coping mechanisms, systemic

support, and professional support. These strategies reflect a comprehensive approach to managing PTSD and promoting health behavior change. The use of psychological strategies, such as mindfulness and Cognitive Behavioral Therapy (CBT), has been widely supported in the literature as effective means of reducing PTSD symptoms and facilitating behavior change (Moghadam et al., 2020; Rakhmasari et al., 2021). Social support utilization, including joining support groups and involving family, also plays a crucial role in providing the necessary encouragement and resources (Rumaolat, 2023).

Education and awareness programs help address the knowledge gaps that participants identified as barriers. Providing individuals with information about their options and teaching them new skills can empower them to make healthier choices (Hossain et al., 2020). Physical health interventions, such as regular exercise and nutrition plans, are also vital, as they directly address the physical symptoms and improve overall well-being (Mottershead & Ghisoni, 2021). Adaptive coping mechanisms, such as developing resilience and positive thinking, further support the maintenance of health behavior changes (Rasic et al., 2022).

Systemic support, including access to community resources and policy advocacy, is essential for addressing broader structural barriers (Murray-Krezan et al., 2023). Finally, professional support from therapists and healthcare providers ensures that individuals receive consistent guidance and follow-up, which are crucial for sustained health behavior change (Cabarkapa et al., 2020).

The findings of this study are consistent with previous research that has explored health behavior change in populations with chronic mental health conditions. For example, the role of personal health awareness and support systems has been highlighted in studies focusing on chronic stress and PTSD (Rosenkranz et al., 2010). Similarly, the barriers identified in this study, such as psychological and social obstacles, are well-documented in the literature (Neria et al., 2007).

The strategies for overcoming barriers also align with existing research on therapeutic interventions for PTSD. The effectiveness of CBT and EMDR in reducing PTSD symptoms and promoting health behavior change is well-supported (Akhtar, 2024; Moghadam et al., 2020). Additionally, the importance of social support and systemic changes is emphasized in studies on mental health and disaster response (Lee et al., 2020; Overmeire, 2021).

The study identified key motivators for health behavior change, including personal health awareness, support

systems, personal goals, understanding trauma's impact on health, and professional guidance. Barriers to change included psychological, social, environmental, knowledge-based, physical, reluctance to change, and systemic barriers. Strategies to overcome these barriers encompassed psychological techniques, social support, education, physical health interventions, adaptive coping mechanisms, systemic support, and professional guidance.

This study has several limitations that should be acknowledged. First, the sample size was relatively small and may not be representative of all individuals with PTSD. The use of semi-structured interviews, while providing in-depth insights, may also limit the generalizability of the findings. Additionally, the study relied on self-reported data, which can be subject to recall bias and social desirability bias.

Future research should aim to include larger and more diverse samples to enhance the generalizability of the findings. Longitudinal studies would be beneficial to examine how health behavior changes evolve over time and to identify the long-term effectiveness of different strategies. Additionally, research could explore the specific mechanisms through which psychological and social support interventions facilitate health behavior change in individuals with PTSD. Investigating the role of technology-based interventions, such as virtual reality therapy, could also provide new avenues for supporting this population (Akhtar, 2024).

For practitioners working with individuals with PTSD, it is crucial to adopt a holistic approach that addresses the multifaceted nature of health behavior change. Integrating psychological therapies like CBT and EMDR with social support and education programs can provide comprehensive support. Healthcare providers should also advocate for systemic changes that improve access to resources and reduce structural barriers. Tailoring interventions to the specific needs and contexts of individuals with PTSD will enhance their effectiveness and support sustained health behavior change.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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