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Enhancing Quality of Life for Caregivers of Adolescents with Emotional Disorders through Digital Skills

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Abstract

Background: Caring for adolescents with emotional disorders places a substantial burden on caregivers, negatively influencing their quality of life and well-being. An increase in digital skills may provide caregivers with additional resources to support their charges and enhance their own mental health. Objective: This paper seeks to investigate the impact of interventions that improve digital skills for caregivers, targeting the enhancement of their ability to support adolescents with emotional disorders, with the goal of augmenting both their and the adolescents' quality of life. Methods: The paper synthesizes research findings on the efficacy of digital interventions, such as psychoeducation and skills training, and examines the importance of digital skills in managing the emotional and social challenges often encountered by caregivers. It also discusses the role of informal caregivers and the burden they experience across different cultures and socioeconomic contexts. Results: Effective strategies for reducing caregiver distress include interventions to bolster emotional and social skills, leadership capabilities, and coping mechanisms. Classification systems for mental disorders and the need for long-term care plans are also reviewed to provide a comprehensive understanding of the context in which caregivers operate. Conclusion: The study suggests that a comprehensive support approach—including psychoeducation, skills training, and therapeutic counseling—is necessary for enhancing caregivers' well-being. These interventions are crucial for aiding caregivers in managing their mental health needs and improving the overall outcomes for adolescents with emotional disorders.

Keywords: *Caregivers, Emotional Disorders, Adolescents, Digital Skills, Quality of Life, Mental Health, Psychoeducation, Skills Training, Therapeutic Counseling, Caregiver Burden*

1. Introduction

Serious mental illnesses, such as schizophrenia spectrum disorders, bipolar disorder, etc., cause significant functional impairment, increase the likelihood of disability and reduce life expectancy. The increase in the number of people, particularly adolescents, with mental disorders has resulted in an increase in the number of family members (spouses, friends or close others) who are charged with the care of these patients, providing full support and are referred to as carers. Family or informal caregivers are important in the care of the chronically ill, usually acting as decision-makers and providing vital support to their loved ones, in particular loved ones who are facing serious mental illnesses, with significant consequences for themselves. Mental illness has far-reaching consequences for both patients and their careers. The burden of caregiving has been assessed by the literature through studies, which although differing in the criteria used, there is broad agreement that caregivers are extensively burdened by their demanding daily lives and are often not supported in their caregiving role. Emotional burden and burnout can negatively impact the mental health and quality of life of carers of people with mental disorder, as well as worsening the clinical course of the patient.

Expenditure on hospital care accounts for about 1/3 of total health expenditure and most of the hospital expenditure is covered by public funds through the National Health Service. People with chronic diseases and long-term care needs, such as those with mental disorders, are at particular risk of hospitalization. While some hospitalizations are considered unavoidable, many of them could be avoided, bringing significant multiple benefits in terms of both health and cost by reducing hospitalization. Long-term care caregivers potentially significantly reduce the likelihood of increased hospitalizations for people with mental disorders (Konetzka, et al 2008). Of particular importance is to capture through this research how carers of people with mental disorder perceive their feelings of anxiety and stress due to the long-term care they provide, in relation to their quality of life and through their experiences as carers in the health service system. Carers' perceptions of health and quality of life have been the subject of extensive research in recent years. This research will focus on the quality of life of caregivers of people with mental disorders in order to better document this issue for this particular group of caregivers.

Improving the well-being of caregivers of teenagers with emotional disorders through digital skills is essential in healthcare. Adolescents with emotional disorders often cause negative emotional consequences for their caregivers, resulting in dysfunctional coping strategies (Sullivan & Miller, 2015). The relationship quality between adolescents and their caregivers is vital for developing emotional regulation skills (Babo, 2023). Research findings from meta-analyses indicate that psychoeducation, skills training, and counseling are practical approaches for reducing distress and improving the quality of life among caregivers (Mosher et al., 2015). Moreover, the psychological welfare of parents plays a crucial role in enhancing the overall quality of life for adolescents with conditions (Carrada et al., 2019). Research conducted by Reynard et al. (2022) has demonstrated the potential of digital interventions to improve emotional regulation abilities in children and early adolescents, positively influencing their overall well-being.

Furthermore, interventions targeted at improving emotional and social skills in young individuals can foster their psychological and social well-being and growth (Sancassiani et al., 2015). Additionally, implementing a skills intervention for parents holds the potential to yield favorable effects on the outcomes of adolescents, specifically in the context of anorexia nervosa (Philipp et al., 2021). Recognizing the significance of emotional and social intelligence is crucial for maintaining and enhancing individuals' functionality, communication, and quality of life with specific conditions, such as dementia (Berenbaum et al., 2020). Moreover, fostering social and emotional abilities during early childhood establishes the groundwork for subsequent proficiencies and advantages, such as emotional wellness and psychological well-being (Schneider et al., 2021). Ultimately, the emotional well-being of caregivers of adolescents with emotional disorders is intricately connected to the nature of their relationship with the adolescents. Interventions that focus on improving emotional and social skills can enhance caregivers' and adolescents' overall quality of life. Interventions utilizing digital technology, training in specific skills, and providing education on psychological matters have demonstrated the potential to assist caregivers and enhance the mental health of adolescents with emotional disorders.

2. Mental Disorders

Mental disorders encompass a broad spectrum of conditions that impact an individual's cognitive processes, emotional state, actions, and emotional disposition. They can substantially influence diverse facets of life, encompassing occupational performance, physical well-being, and interpersonal connections (Koutsopoulou et al., 2024). Extensive research has been conducted on the occurrence of mental disorders in various populations, including elite athletes, adolescents, and postpartum women (Gouttebarge et al., 2019; Meltzer-Brody et al., 2018; Kessler et al., 1996). Gaining insight into epidemiology and risk factors linked to mental disorders is essential for formulating efficacious prevention and intervention strategies. Moreover, understanding the prevalence of mental health symptoms and disorders in particular groups, such as elite athletes, can provide valuable information for implementing focused assistance and intervention initiatives (Gouttebarge et al., 2019). An exhaustive examination of mental disorders is crucial for effectively addressing the intricate difficulties linked to prevention, treatment, and management (Gkintoni, 2023). Hence, it is imperative to possess a comprehensive comprehension of the diverse manifestations of mental disorders and their ramifications on individuals and society in order to advance mental health research and enhance clinical practice (Bland et al., 2020).

Furthermore, the importance of mental and physical health is enduring and more evident than ever in contemporary healthcare systems. The World Health Organization (WHO) defines mental health as "the condition of being in a state of well-being where an individual effectively manages life's challenges, can be productive in their work, and actively engages in their social surroundings" (WHO, 2001). This dynamic definition encompasses health as more than the absence of illness or disorder. It defines health as the individual's capacity to engage and interact with their social environment actively. Mental health is a complex and subjective concept that encompasses more than just the absence of mental disorders. It includes various important factors such as self-image, self-determination, self-efficacy, self-control, optimism, resilience, and the ability to seek and provide support.

The mental disorder typically impairs the individual's ability to function effectively, restricting their capacity for creative pursuits and eroding their self-confidence and self-perception. This condition also disrupts their daily life and interactions within their social environment.

Mental disorders involve a broad spectrum of psychosomatic symptoms experienced by individuals. Mental illness encompasses a variety of disorders affecting the mind, including those related to perception, cognition, and emotion, as determined by diagnostic criteria. Some examples of mental disorders include mood disorders (such as depression, bipolar disorder, and mania), borderline personality disorder, congenital psychoses, schizophrenia, neuroses, anxiety disorders, neurodevelopmental disorders, dementia, body dysmorphic disorders, eating disorders, and substance dependence disorders. Long-term care provides the opportunity for deliberate care by creating personalized care plans that consider the needs of individuals with a mental disorder and their life circumstances. Medical guidelines are formulated by considering personalized evidence for each patient, and consensus is crucial in influencing future long-term care.

3. Classification of mental disorders

The classification of mental disorders is a key tool in psychopathology to achieve an accurate diagnosis. It is a way of grouping based on the common features shared by different mental disorders, guided by the individual's emotional, cognitive, and perceptual abilities. The aim of taxonomic systems is to provide a multifaceted and holistic assessment of the individual through the evaluation of biological, social, and environmental conditions, recognising that they are an integral part of the individual's daily life. It also assesses how functional the individual has been in the recent past and how they are functioning in the present.

The classification of mental disorders is considered necessary in order to enable the organisation of the information available and, consequently, smooth communication and understanding between health professionals, since in this way they acquire a common language, a common code of communication.

Disease classification is defined as 'a system of categories in which disease entities are listed according to established criteria'. The statistical classification of diseases encompasses the entire spectrum of disease states within enough categories. The most encountered classification systems for psychiatric disorders are the International Statistical Classification of Diseases and Related Health Problems (ICD-10-CM) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR).

According to the revised version of ICD-10, the following sections are presented in the chapter 'Mental and behavioural disorders':

- F00-F09: Organic, (including symptomatic), mental disorders
- F10-F19: Mental and behavioural disorders due to the use of psychoactive substances
- F20-F29: schizophrenia, schizotypal and delusional disorders
- F30-F39: affective disorders (F30-F39)
- F40-F48: neurotic, body dysmorphic and anxiety disorders

- F50-F59: behavioural syndromes related to physiological disorders and physical factors
- F60-F69: adult personality and behavioural disorders
- F70-F79: mental retardation
- F80-F89: disorders of physiological development
- F90-F98: Emotional and behavioural disorders usually starting in childhood and adolescence
- F99: Miscellaneous cognitive disorders (WHO, 2022).

On the other hand, the DSM-IV-TR classification uses five axes to assess diseases. It is noted that there is a focus on issues that have a cultural background. These five axes are:

- Axis I: All mental diagnostic categories except mental retardation. A number of common mental disorders such as depression, anxiety disorders, schizophrenia, bipolar disorder, anorexia nervosa and bulimia nervosa have been included in this axis.
- Axis II: Personality disorders and mental retardation. Disorders such as antisocial personality disorder, limbic personality disorder, schizoid personality disorder, paranoid personality disorder, narcissistic, obsessive-compulsive and intellectual disabilities have been included here.

The next three axes that follow attempt to cover a broader context of the person in which the disorder falls.

- Axis III: General medical condition, acute medical conditions and physical disorders. Brain injuries and other physical disorders that may exacerbate existing disorders or present symptomatology of other similar disorders have been included in this axis.
- Axis IV: Psychosocial and environmental factors contributing to the disorder.
- Axis V: Global assessment of the individual's social, occupational and individual functioning.

4. Long-term care

The literature has recently become increasingly interested in caregiver burden and the difficulties in providing care. Several concepts describe caregiver burden. However, the most common terms are objective and subjective burden. Objective burden represents observable and verifiable periods of absence from caregiving, while subjective burden represents personal feelings of burden (Kuipers et al., 2010).

The diagnosis of a chronic disease often brings a disruption to the sufferer's daily life. The individual loses functionality in family relationships and professional life through the loss of integrity, good health, and physical, mental, or emotional abilities. These losses place an unbearable burden on the individual for the life lost. At the same time, he or she needs help, but it is tough for an adult in his or her family or friends to take on the responsibilities of such care. It is challenging to take on the role of carer at a time in one's life when one may be called upon to cope with the demands of one's own life, such as the demands of a professional career, personal development, and the demands of family life (Chesla, 2005). Thus, they are forced to operate differently, leaving their plans and redefining their plans and dreams in a new reality.

The concept of caregiving is described as a human trait and a therapeutic intervention. It is often seen within interpersonal relationships as a moral obligation expressed through attitudes and behaviors. It is a multidimensional concept that each person forms his or her attitude according to the religious and cultural context to which he or she belongs. Caring requires commitment, skills, and knowledge.

This role is one that only some individuals are prepared for today in modern societies of the Western world. They need to prepare to take on the role of caregiver, stripped of the skills to handle emotional and physical demands imposed on them. Within a holistic approach, long-term care by family/family carers is recognized as an integral part of the overall care of the chronically ill.

Carers of people with a mental disorder must be supported formally and informally by family members, relatives, friends, and national health policy through support structures and services to help them maintain their health and well-being. The experience of loneliness and powerlessness that some carers are likely to feel can reduce their ability to provide quality care, limit their goals and activities in life, reduce quality of life levels, and lead to mental health problems such as anxiety and depression (Bowman et al., 2017).

The experience of providing care is multidimensional and complex. Carers play a vital role in helping people with serious mental illness. Supporting caregivers by reducing their workload and improving their mental health can help them continue to support their loved ones while facing the challenges of providing care. Caregiver education can reduce caregiver burden and increase their quality of life.

5. Informal carers

In an attempt to define informal care, we could say that it is the provision of daily and health care assistance, in all aspects of daily life, to dependent persons, from family, friends, neighbors, or anyone else in the immediate social network, but who do not usually receive financial compensation for the help they provide (Masaret & La Parra, 2011). Usually, the people who take on the role of informal caregiver come from the immediate family environment. This responsibility is sometimes fragmented and shared by more than one person.

To meet this new challenge, families who primarily take on informal caregiving develop specific coping strategies for the increased stress they experience. These strategies include passive coping, reframing, spiritual support, social support, and health services support (Goldforto et al., 1986).

The role of informal carers and how this care is delivered can vary from country to country, as it depends on many important factors. These factors are related to tradition, social policy, legislative framework, national wealth, national budget, how health care is structured, and demographic trends in life expectancy and fertility levels (Allen et al., 2012).

Informal carers of people living with severe mental health problems may not be identified with the term carer. Their role is more challenging even during a simple transition to health services as they face additional stress (Clibbens et al., 2019).

Informal carers of people with mental disorders provide care for a very high number of hours compared to carers of people with other chronic illnesses. They are a critical part of providing care for people with mental disorders and often report feeling excluded and under-supported by health professionals (Clibbens et al., 2019).

Unpaid care is found in different cultures and civilizations and is provided by people outside health professionals, primarily family members, parents, siblings, or even friends. These unpaid so-called informal caregivers oversee daily care with everything from home care, help with daily chores, and even accompanying the attending physician and care when hospitalization is required in cooperation with the instructions of health professionals (Stavrianou et al., 2018; Goodhead & McDonald, 2007). The care provided by informal caregivers can vary in terms of its characteristics, particularly the type of assistance provided, its location, duration, and intensity (Broese et al., 2016).

6. Quality of life of carers

Numerous definitions of quality of life (QOL) have been created over the past forty years. The World Health Organization (WHO) defines Quality of Life (QoL) as an individual's subjective assessment of their position in life, taking into account their cultural and value systems, as well as their standards and concerns (THE WHOQOL GROUP 1995). To be more precise, the World Health Organization's QOL group (WHOQOL-G) has defined quality of life (QoL) as "the way individuals perceive their position within the cultural and value systems of their environment, as well as their goals, aspirations, and concerns" (The WHOQOL-G, 1998). The WHOQOL-G acknowledges that individuals' evaluations of their lives are subjective and influenced by their cultural heritage, past encounters, inclinations, and aspirations. Consequently, the quality of life is subject to change since it is affected by individuals' responses, emotions, physical well-being, and personal encounters (Carr et al., 2003).

Quality of life is crucial for contemporary communities and economies, and it remains a profoundly human-centered and intricate concept as it seeks to connect human wants with human actions. The word "quality of life" is inherently subjective and varies for each individual. Quality of life is an intricate and diverse phenomenon encompassing multiple components and variables, resulting in forming a comprehensive entity, as viewed from both scientific and social perspectives. Quality of life is a framework for assessing physical well-being, psychological factors, and social interactions (Gkintoni et al., 2022a). Physical health encompasses the capacity for movement, self-reliance, occupational capability, and the proper operation of essential bodily systems. The social sphere encompasses familial dynamics, interactions with individuals of the opposite gender, and the broader social dimensions of existence. During the 1980s, this word gained use as a measure in social research focused on reducing disparities and promoting equitable allocation of resources.

According to the literature, caregivers undergo physical and mental strain, leading to a decline in overall well-being. The role of the caretaker is demanding and a source of concern due to the recorded reactions and repercussions of providing care. According to Gupta et al. (2015), individuals who take care of people with schizophrenia experience a lower quality of life compared to individuals who do not provide care or those who care for individuals with different illnesses. The strain of providing objective and subjective informal care is substantial, resulting in a correspondingly low quality of life. A study conducted by Rahmani et al. (2022) found that 38.2% of caregivers of individuals with mental disorders have a significant level of difficulty in their caring responsibilities. On average, caregivers of individuals with mental problems dedicate at least 22 hours per week to caregiver-related tasks. There is a strong association between the amount of employment a caregiver has and their overall quality of life, as demonstrated by Ribe et al. (2018).

Significant factors associated with caregiver burden include age, gender, education level, employment disruption, income, relationship with the patient, frequency of care, and duration of the patient's sickness (Peng et al., 2019). Caregivers of individuals with mental disorders experience increased strain due to the severity and duration of the patient's symptoms, the number of requirements they have, the level of their handicap, and their reduced social interests (Grandon et al., 2008; Aranda-Reneo et al., 2008).

Schizophrenia is a psychiatric condition that impairs the patient's capacity to engage in everyday tasks, hence heightening their reliance on caregivers. The objective burden of caring encompasses the provision of daily help in a range of jobs and domestic chores due to the disruptive conduct exhibited by patients in their daily activities (Awad & Voruganti, 2008; Ochoa et al., 2008). Conversely, subjective burden refers to how caregivers personally experience the weight of this responsibility, which can encompass emotions such as humiliation, embarrassment, guilt, or self-blame. The convergence of these factors has implications for the physical, psychological, economic, and emotional welfare of caretakers of individuals with mental illness (Aranda-Remeo et al., 2013; Boyer et al., 2012; Awad & Voruganti, 2008).

Individuals who care for people with schizophrenia experience worse mental (MCS) and physical (PCS) quality of life compared to those who do not provide care (MCS 40.3 vs. 45.9 and PCS 46.8 vs. 49, respectively). Additionally, caregivers receive lower social support services (0.64 vs. 0.71). According to Gupta et al. (2015), caregivers of individuals with chronic diseases have inferior mental health quality compared to caregivers of persons with other chronic conditions (40.3 vs. 42.7). Additionally, they receive a lower degree of social support services (0.64 vs. 0.67). The reference is Gupta et al., 2015.

It is crucial to emphasize that caregiver burnout detrimentally impacts the caregiver's effectiveness in their assigned duty. This leads to the hastening of the process of institutionalizing individuals with mental problems, as evidenced by the rise in their mortality rates (Gaugler et al., 2005).

A low burden of care and ample social and professional assistance have been identified as positive factors that contribute to the quality of life for caregivers of individuals with mental disorders (Ribe et al., 2018). Caregivers perceive that their overall well-being would be enhanced if granted additional personal time, allowing them to maintain a certain level of separation from the individual they care for. The autonomy of caregivers is crucial for them to engage in their interests and potentially resume activities put on hold due to caregiving responsibilities (Vellone et al., 2012).

Given the various challenges involved in caregiving, significant focus has been placed on the mental well-being of caregivers and the potential hardships they may encounter, including anxiety, sadness, and discomfort.

7. Symptomatology of Anxiety and Depression in Caregivers

The World Health Organization (WHO) states that mental disease is widespread in all social classes, countries, and societies (WHO, 2001). To address this issue, WHO has created an action plan to provide guidance and assistance for mental health (WHO, 2020). Anxiety and depression are prevalent diagnoses in primary care, accounting for around 24% of cases in the mental health sector (Andrews et al., 2020).

Anxiety, in the field of psychology, refers to a state characterized by heightened tension and stress. Minimal stress levels can be desirable, advantageous, and conducive to good health. Positive stress can be beneficial and adaptable in the surrounding environment. Stress can manifest as external stressors influenced by the surrounding environment. Alternatively, it can arise from internal cognitions or other adverse affective states, such as stress and unease (Savithri & Ragothaman, 2016).

Stress is the general reaction to any request for alteration that is not specific. According to this understanding, stress is considered a neutral concept. Events are deemed stressful depending on the individual's cognitive assessment (Gkintoni et al., 2024a) The evaluation is contingent upon the circumstance's origin, duration, manageability, and desirability (Le et al., 2003).

Research has revealed that those who care for people with mental problems often experience a decline in their mental well-being, characterized by symptoms of worry, stress, and depression (Gupta et al., 2015; Caqueo-Urizar et al., 2009). Anxiety and depression are commonly evaluated based on symptoms such as persistent worrying, feelings of low self-esteem, reduced engagement in daily activities, and disruptions in sleep and energy levels (American Psychiatric Association, 2013). Caregiver distress refers to the experience of emotional suffering, such as loss, helplessness, or fear, that arises in response to stressors that impact caregivers (Stanley et al., 2017; Mitsonis et al., 2012).

Anxiety and depression are well-defined and separate concepts. When examining caring, it is crucial to consider the caregiver's traits, as caregiving is affected by other aspects apart from the condition. These factors include a lower quality of life, the advanced age of the caregiver, an extended period of illness, and the presence of stigma (Gkintoni & Ortiz, 2023; Karambelaw et al., 2022).

A substantial body of research has established that caregivers experience elevated levels of anxiety and despair. According to Gupta et al. (2015), caregivers of individuals with schizophrenia are at a higher risk of encountering sleep disturbances, insomnia, pain, and anxiety compared to caregivers of individuals with other long-term illnesses. The incidence of depression among individuals who provide long-term care for patients is between 15% and 32%, which is 1% to 10% higher compared to the overall population. Upon receiving a diagnosis of depression, family members have a heightened occurrence of depressed symptoms. This can be attributed to their limited comprehension of the illness and the lack of utilization or availability of social support systems (Cuijpers, 2005). According to a study conducted by Terayama et al. in Japan in 2018, the prevalence of depression among long-term caregivers of dementia patients was 36% before they participated in an educational program. In the UK, a rate of 29.4% was reported by Coope et al. in 1995.

Three primary perspectives on anxiety are subject to debate. The first perspective posits anxiety as an emotional condition, the second as trait anxiety, a characteristic of personality, and the third as a collection of anxiety disorders. A comprehensive theory of anxiety has been formulated using a cognitive approach (Eysenck, 1997), which encompasses four factors that impact the intensity of anxiety: experimental arousal, internal physiological activity, internal cognitions such as fears, and one's actions.

Family members with a strong familial bond tend to provide care for patients over a longer duration, dedicating most of their time to caregiving (Oikonomou et al., 2024). This can lead to severe anxiety and an increased load. Caregivers who have undergone an educational intervention for formal care experience considerably reduced symptoms of load and depression compared to caregivers who did not get any training program (Martin-Carrasco et al., 2009; Gaugler et al., 2008; Mittelman et al., 2007). Education for caregivers leads to a substantial decrease in depressive symptoms, reducing them by almost 50%, from 36% to 17% within three months. Conversely, the prevalence of depression symptoms among untrained caregivers rose from 22% to 50% throughout the identical period (Tarayama et al., 2018).

8. Digital Skills for Enhancing Quality of Life for Caregivers

Digital skills are essential for improving the overall well-being of caregivers responsible for adolescents with emotional disorders. The COVID-19 pandemic has emphasized the necessity for pragmatic digital mental health resources to assist caregivers, particularly in difficult circumstances like lockdowns and heightened caregiving obligations (Petrovic & Gaggioli, 2020). These tools include coping skills, emotion control, and skill-building, which are crucial for caregivers to effectively manage adolescents with emotional disorders. In addition, the Unified Protocols for adults and children have been adapted to cater to the specific requirements of parents and caregivers living with young people during the pandemic. This highlights the significance of customizing digital interventions to suit caregivers' distinct difficulties (Ehrenreich–May et al., 2021).

Moreover, research has demonstrated that caregivers of individuals with eating disorders can enhance their caregiving experience and alleviate psychological suffering by acquiring targeted knowledge and coping skills through organized family interventions. The CASK Scale has been employed to assess caregivers' self-perceived skills, such as insight and acceptance, emotional intelligence, and frustration tolerance. This emphasizes the significance of evaluating and improving these skills in caregivers (Zeiler et al., 2020). Furthermore, interventions targeting the improvement of emotion regulation abilities in teenagers have shown favorable results, such as reduced anxiety and depression symptoms. This highlights the potential advantages of providing digital skills training to both caregivers and adolescents (Emmelkamp et al., 2022; Larsson et al., 2019).

Psychosocial and digital skills development have been recognized as factors that safeguard adolescents, enabling them to regulate their online actions and cultivate digital resilience (Antonopoulou et al., 2021a; Antonopoulou et al., 2021b; Throuvala et al., 2021). This underscores the significance of directing attention toward caregivers and providing teenagers with the essential abilities to manage their emotional well-being in digital technology. In order to promote the well-being of both caregivers and adolescents with emotional disorders, it is crucial to provide digital skills and interventions that are specifically designed to meet the requirements of these caregivers (Antonopoulou et al., 2020; Antonopoulou et al., 2019). This is particularly important in light of the unique problems posed by the COVID-19 epidemic.

Additionally, gamification has emerged as a viable strategy for improving the quality of life for caregivers of adolescents with emotional problems. The COVID-19 pandemic has highlighted the importance of implementing efficient methods for managing stress and regulating adolescent emotions (Giannoulis et al., 2022a). The World Health Organization has suggested the use of gamified interventions as a means to assist adolescents in coping with stress and maintaining healthy lifestyles during difficult periods (Gkintoni et al., 2021b; Guessoum et al., 2020). Moreover, the implementation of gamification has been linked to enhanced emotional regulation and coping abilities, which are crucial for caregivers who are dealing with the intricacies of assisting adolescents with emotional illnesses (Antonopoulou et al., 2021; Giannoulis et al., 2022b; Guessoum et al., 2020). Moreover, using gamified therapies can effectively enhance caregivers' emotional well-being and overall quality of life. These interventions offer practical resources to help caregivers cope with stress and preserve their mental well-being (Roncada et al., 2020).

Furthermore, the implementation of gamification in interventions for caregivers of individuals with severe anorexia nervosa has demonstrated encouraging outcomes in diminishing caregiver burden and expressed emotion, resulting in enduring enhancements in symptoms and quality of life for both caregivers and patients (Hibbs et al., 2015; Magill et al., 2015). Moreover, the creation of gamified therapies customized to the requirements of caregivers holds the potential to tackle the psychosocial difficulties that caregivers of adolescents with emotional disorders encounter. This, in turn, can enhance their general well-being and resilience (Silva et al., 2022; Tzachrista et al., 2023). Furthermore, the implementation of gamification has been linked to enhanced emotion regulation, as reported by caregivers, and decreased symptoms of anxiety and depression in adolescents with neuropsychiatric disorders. This underscores its capacity to influence the well-being of caregivers and adolescents positively (Cai et al., 2021; Gkintoni et al., 2021a).

Ultimately, gamification has great potential in improving the overall well-being of caregivers who are responsible for adolescents with emotional disorders. Interventions incorporating gamification can potentially enhance emotional regulation, coping skills, and general well-being in both caregivers and adolescents (Antonopoulou et al., 2022b; Gkintoni et al., 2024b). Through the strategic use of gamification, interventions can successfully tackle the distinctive obstacles caregivers face, ultimately resulting in enhanced mental health outcomes and overall quality of life.

Moreover, to improve the well-being of caregivers of adolescents with emotional problems, a comprehensive approach is necessary. This approach should include the development of leadership abilities, emotional intelligence (Gkintoni et al., 2023d), and appropriate coping mechanisms (Antonopoulou et al., 2023; Gkintoni et al., 2023a; Gkintoni et al., 2023c). Caregivers of adolescents with emotional disorders encounter a wide array of challenges, encompassing tasks such as overseeing the emotional welfare of adolescents and tending to their mental health requirements (Gkintoni & Dimakos, 2022). Research has demonstrated that interventions that prioritize psychoeducation, skills training, and therapeutic counseling can significantly enhance the well-being of caregivers who are responsible for individuals with different health conditions, such as cancer and asthma. The study of Mahendran et al. in 2017 is referenced by Guerra-Martín et al. in 2023. Moreover, cultivating emotional intelligence has been recognized as crucial in enhancing job performance, decision-making, and effective management, (Antonopoulou et al., 2022a; Halkiopoulos et al., 2021) underscoring the need to foster leadership abilities among caregivers (Halkiopoulos et al., 2022; Poonam et al., 2022).

The role of caregivers in fostering emotion control and coregulation in teenagers is vital, alongside leadership and emotional intelligence (Antonopoulou et al., 2023; Halkiopoulos et al., 2021b). Caregivers have a crucial function in offering external assistance and structure to aid teenagers in managing their emotional encounters, thereby impacting the formation of emotion regulation abilities in adolescents (Halkiopoulos et al., 2023; Paley & Hajal, 2022). Furthermore, treatments targeting the improvement of caregivers' emotional and mental well-being have positively influenced their overall quality of life (Antonopoulou et al., 2023). Implementing psychoeducational programs and skills training has been linked to a decrease in caregiver load and enhanced overall quality of life (Gkintoni et al., 2023b; Gkintoni et al., 2021c; Nayak & George, 2021; Sortwell et al., 2023).

Finally, the significance of caregiving on caregivers' mental well-being and overall quality of life should be considered. The caregivers of patients with neurocognitive diseases, such as Alzheimer's disease and stroke, frequently encounter emotional and financial difficulties. This highlights the importance of providing comprehensive assistance and therapies to address their well-being (Dindelegan et al., 2020). Moreover, the level of attachment relationships formed in caregiving environments has been recognized as a factor that can either put adolescents at risk or provide them with protection in terms of their emotional well-being and life goals in residential care settings. This emphasizes the significance of addressing the psychosocial needs of caregivers.

To summarize, improving the well-being of caregivers of adolescents with emotional disorders necessitates a comprehensive approach that includes the development of leadership abilities, emotional intelligence, and efficient coping mechanisms (Antonopoulou et al. 2023; Gkintoni et al., 2022b). Implementing interventions focused on cultivating these skills, attending to the mental health requirements of caregivers, and offering comprehensive assistance can significantly enhance the welfare of caregivers and, consequently, the adolescents under their supervision.

9. Conclusion

In conclusion, the research has consistently highlighted the multifaceted challenges faced by caregivers of individuals with mental health disorders—be it schizophrenia, Alzheimer's disease, or emotional disorders in adolescents. The common threads underline that caregiver burden is a critical determinant of both their physical and mental health outcomes. The impact of this burden manifests in increased levels of distress, anxiety, depression, and a diminished quality of life. These findings underline the necessity for targeted interventions that focus on alleviating the heavy emotional and logistical load that caregiver’s shoulder. Educational interventions, including those augmented with gamification strategies, have the potential to offer significant support by improving coping strategies and emotional regulation. Moreover, the importance of providing a comprehensive support network is clear to sustain both the well-being of the caregivers and the optimal care of the individuals they support. The adoption of valid measurement tools, such as the SF-12, further aids in systematically assessing and addressing the caregivers' needs. It is crucial that caregivers receive adequate and sustained emotional, educational, and social support to mitigate the effects of their role and enhance their overall well-being.

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