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Review Article

Skin Cancer: Psychological Impact and Psycho-Oncological Intervention in Clinical Dermatology

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Abstract

Skin cancer is one of the most prevalent malignancies worldwide and represents a growing challenge in dermatological practice, with implications that extend beyond physical morbidity to include significant psychological and psychosocial burden. Patients diagnosed with melanoma and non-melanoma skin cancers frequently experience emotional distress, anxiety, depressive symptoms, body image concerns, and functional impairment, all of which may negatively influence treatment adherence, recovery, and overall quality of life. This narrative review aims to synthesise current evidence on the psychological impact of skin cancer and to highlight the relevance of psycho-oncological approaches within clinical dermatology. A structured literature search was conducted in b-on and Google Scholar, including articles published between 2003 and 2023 that addressed psychological outcomes, quality of life, and psychosocial interventions in skin cancer populations. The reviewed literature identifies key psychosocial risk factors for distress, including younger age, female sex, visible tumour location, maladaptive illness perceptions, and limited social support. Evidence supports the effectiveness of brief, structured psychological interventions—particularly those grounded in cognitive–behavioural therapy—in reducing distress and improving patient-reported outcomes. Based on these findings, a clinically applicable six-session individual psychological intervention is proposed, designed to complement dermatological and oncological care. Integrating psycho-oncological support into routine dermatology practice may enhance holistic patient management, improve quality of life, and optimise clinical outcomes in skin cancer care.

Keywords: behavioural therapy; psychological; psycho-oncological

Introduction

Skin cancer is among the most common malignancies globally and continues to increase in incidence, particularly in regions with high ultraviolet radiation exposure. Although advances in dermatological diagnosis and treatment have substantially improved prognosis—especially when lesions are detected early—the psychological impact of a skin cancer diagnosis remains under-recognised in routine clinical practice (Lemos, Rothes, Oliveira, & Soares, 2017). For many patients, the diagnosis evokes fear, uncertainty, and cancer-related fatalism, which may persist throughout treatment and survivorship (Moser et. Al, 2014). Unlike several other oncological conditions, skin cancer frequently affects visible areas of the body, such as the face, neck, and hands. Surgical treatment, while often curative, may result in scarring or disfigurement, with potential consequences for body image, self-esteem, and social functioning. These factors place skin cancer at the intersection of clinical, cosmetic, and psychological dermatology, highlighting the importance of a holistic, patient-centred approach (Santos Silva, I., Soares, L., & Schifferdecker-Hoch, F., 2024). Boyle et al. (2004) suggested that, in the coming decades, skin cancer will be considered the most significant type of cancer for public health. Clinical data and conducted research demonstrate that a skin cancer diagnosis has the potential to change all essential aspects of a person's daily life – self-identity, body image, perception of well-being, quality of life, family, social, and romantic relationships, and career (Kasparian et al., 2009; Soares, Gomes, Santos Silva, 2024). The present review focuses on the psychological dimensions of skin cancer within the context of clinical dermatology. It aims to (1) summarise current evidence regarding psychological distress and quality-of-life outcomes in skin cancer patients, (2) examine the role of psycho-oncology as a complementary component of dermatological care, and (3) propose a structured psychological intervention model that is feasible and relevant for integration into clinical settings.

Methodology

The literature review was conducted between September 23, 2023, and October 31, 2023, through an electronic search of articles available on the b-on and Google Scholar databases. The following descriptors and Boolean operators were used: TX (“Psycholog" or “Psycho-oncology”) AND TX ("skin cancer" or "melanoma" or “non-melanoma”) *. Considering the study's objective, the final sample consisted of articles indexed in academic journals, selected after an initial review of the abstracts based on the following inclusion criteria:

1. Publication year: articles published between 2003 and 2023;
2. Language: articles written entirely in English;
3. Subject matter: articles that included the keywords defined for this research question (e.g., “psychology”, “skin cancer”, “health psychology”, “quality of life”, “psycho-oncology”).

Accordingly, the exclusion criteria were:

1. articles published before 2003;
2. articles not featured in academic journals;
3. articles that did not directly focus on the research question or were directed at themes unrelated to psychology and skin cancer;
4. articles without the full text available; and
5. articles written in a language other than English or Portuguese.

During the screening process, titles, abstracts, and keywords were reviewed. Articles that met these criteria were subsequently read in full and included in the theoretical review. Additionally, articles found through the reference lists of the selected sample were included, as well as articles provided by Professor Luísa Soares, PhD, instructor of the Health Psychology course within which this review is integrated. In addition to scientific articles, reliable health and oncology websites were also consulted. The final sample consisted of 24 scientific articles and 10 websites (Table 1).

Publication Year	n	Reference
2004	1	Boyle, P., Dore, J. F., Autier, P., & Ringborg, U. (2004). Cancer of the skin: a forgotten problem in Europe. *Annals of Oncology*, *15*(1), 5-6.
2005	3	Boesen, E. H., Ross, L., Frederiksen, K., Thomsen, B. L., Dahlstrøm, K., Schmidt, G., ... & Johansen, C. (2005). Psychoeducational intervention for patients with cutaneous malignant melanoma: a replication study. *Journal of Clinical Oncology*, *23*(6), 1270-1277. Lehto, U.-S., Ojanen, M., & Kellokumpu-Lehtinen, P. (2005). Predictors of quality of life in newly diagnosed melanoma and breast cancer patients. *Annals of Oncology*, *16*(5), 805–816. https://doi.org/10.1093/annonc/mdi146 Weihs K, Politi M. Family development in the face of cancer. In: Crane DR, Marshall ES, editors. *Handbook of Families & Health: Interdisciplinary Perspectives*. Thousand Oaks, CA: Sage Publications, Inc., 2005;3-18. https://doi.org/10.4135/9781452231631
2007	1	Lehto, U. S., Ojanen, M., Dyba, T., Aromaa, A., & Kellokumpu-Lehtinen, P. (2007). Baseline psychosocial predictors of survival in localized melanoma. *Journal of Psychosomatic Research*, *63*(1), 9-15.
2009	2	Cornish, D., Holterhues, C., Van de Poll-Franse, L. V., Coebergh, J. W., & Nijsten, T. (2009). A systematic review of health-related quality of life in cutaneous melanoma. *Annals of Oncology*, *20*, vi51-vi58. Kasparian, N. A., McLoone, J. K., & Butow, P. N. (2009). Psychological Responses and Coping Strategies Among Patients With Malignant Melanoma. *Archives of Dermatology*, *145*(12). https://doi.org/10.1001/archdermatol.2009.308
2010	2	Berger, A. M., Abernethy, A. P., Atkinson, A., Barsevick, A. M., Breitbart, W. S., Cella, D., ... & Wagner, L. I. (2010). Cancer-related fatigue. *Journal of the National Comprehensive Cancer Network*, *8*(8), 904-931 Margreet Scharloo, Baatenburg, R. J., Ton, Els van Velzen-Verkaik, den, D., & Kaptein, A. A. (2010). Illness cognitions in head and neck squamous cell carcinoma: predicting quality of life outcome. *Support Care Center*, *18*(9), 1137–1145. https://doi.org/10.1007/s00520-009-0728-x
2012	1	Peters, E. M. J. (2012). Psychological support of skin cancer patients. *British Journal of Dermatology*, *167*, 105-110.
2013	1	Radiotis, G., Roberts, N., Czajkowska, Z., Khanna, M., & Körner, A. (2013). Nonmelanoma Skin Cancer: Disease-Specific Quality-of-Life Concerns and Distress. *Oncology Nursing Forum*, *41*(1), 57–65. https://doi.org/10.1188/14.onf.57-65
2014	1	Moser, R. P., Arndt, J., Han, P. K., Waters, E. A., Amsellem, M., & Hesse, B. W. (2014). Perceptions of cancer as a death sentence: Prevalence and consequences. *Journal of Health Psychology*, *19*(12), 1518–1524. https://doi.org/10.1177/1359105313494924
2015	1	Beesley, V. L., Smithers, B. M., Khosrotehrani, K., Khatun, M., O’Rourke, P., Hughes, M. C. B., Malt, M. K., Zonta, M. J., Bayley, G. J., Barbour, A. P., Brown, L. J., D’Arcy, J., Allan, C. P., & Green, A. C. (2015). Supportive care needs, anxiety, depression and quality of life amongst newly diagnosed patients with localised invasive cutaneous melanoma in Queensland, Australia. *Psycho-Oncology*, *24*(7), 763–770. https://doi.org/10.1002/pon.3718
2017	1	Li, Y., Lv, M. R., Wei, Y. J., Sun, L., Zhang, J. X., Zhang, H. G., & Li, B. (2017). Dietary patterns and depression risk: A meta-analysis. Psychiatry research, 253, 373-382.
2018	3	Buchhold, B., Lutze, S., Arnold, A., Jülich, A., Daeschlein, G., Wendler, M., Juenger, M., & Hannich, H.-J. (2018). Psychosocial distress and desire for support among skin cancer patients - impact of treatment setting. *JDDG: Journal Der Deutschen Dermatologischen Gesellschaft*, *16*(7), 861–871. https://doi.org/10.1111/ddg.13578

		Lang-Rollin, I., & Berberich, G. (2018). Psycho-oncology. *Dialogues in Clinical Neuroscience*, *20*(1), 13–22. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6016045/ Meiß, F., Loquai, C., Weis, J., Giesler, J. M., Reuter, K., & Dorothée Nashan. (2018). Psycho-oncological care of melanoma patients in certified skin cancer centers. *Journal Der Deutschen Dermatologischen Gesellschaft*, *16*(5), 576–582. https://doi.org/10.1111/ddg.13521
2019	2	National Cancer Institute . (2019). *Skin Cancer Treatment*. National Cancer Institute; Cancer.gov. https://www.cancer.gov/types/skin/patient/skin-treatment-pdq *Programa Nacional para as Doenças Oncológicas*. (2019). Sns.gov.pt. https://www.sns.gov.pt/institucional/programas-de-saude-prioritarios/programa-nacional-para-as-doencas-oncologicas/
2020	4	Buchhold, B., Wiesmann, U., Roeske, K., Lutze, S., Arnold, A., Juelich, A., ... & Hannich, H. J. (2020). Psychosocial stress of dermatology inpatients and their relatives–Comparison of patients with and without cancer. *JDDG: Journal der Deutschen Dermatologischen Gesellschaft*, *18*(10), 1103-1113. Estatísticas da Saúde da Região Autónoma da Madeira de 2020 (2022) Moran, C., Coroiu, A., & Körner, A. (2020). Psychosocial distress in patients with cutaneous melanoma: validation of the Skin Cancer Index (SCI). *Supportive Care in Cancer*, *29*(2), 1005–1014. https://doi.org/10.1007/s00520-020-05568-w World Cancer Research Fund International. (2020). *Skin cancer statistics | World Cancer Research Fund International*. WCRF International. https://www.wcrf.org/cancer-trends/skin-cancer-statistics/
2021	3	Monsell, A., Krzanowski, J., Page, L., Cuthbert, S., & Harvey, G. (2021). What mental health professionals and organisations should do to address climate change. *BJPsych Bulletin*, *45*(4), 215–221. https://doi.org/10.1192/bjb.2021.17 Parker, E. R. (2021). The influence of climate change on skin cancer incidence–a review of the evidence. *International journal of women's dermatology*, *7*(1), 17-27. *Óbitos por algumas causas de morte (%)*. (2021). Www.pordata.pt. https://www.pordata.pt/portugal/obitos+por+algumas+causas+de+morte+(percentagem)-758-235710
2022	2	Liga Portuguesa Contra o Cancro (2022). Cancro e Sofrimento Emocional: Liga Portuguesa Contra o Cancro. Www.ligacontracancro.pt. https://www.ligacontracancro.pt/sofrimentoemocional/ Lepley, M. M. (2022). Skin Cancer Patients' Psychological Well-Being: Identifying the Statistically Significant Predictors. International Journal of High School Research, 4(5).
2023	6	Almeida, V., Pires, D., Silva, M., Teixeira, M., Teixeira, R. J., Louro, A., ... & Teixeira, A. (2023, September). Dermatological Side Effects of Cancer Treatment: Psychosocial Implications—A Systematic Review of the Literature. In *Healthcare* (Vol. 11, No. 19, p. 2621). MDPI. Liga Portuguesa Contra o Cancro (2023a). Aspetos Psicológicos: Liga Portuguesa Contra o Cancro. Www.ligacontracancro.pt. https://www.ligacontracancro.pt/aspectos-psicologicos/ Liga Portuguesa Contra o Cancro (2023b). Cancro da Pele Não-melanoma: Liga Portuguesa Contra o Cancro. Www.ligacontracancro.pt. https://www.ligacontracancro.pt/cancro-da-pele-nao-melanoma/ Liga Portuguesa Contra o Cancro (2023c). Melanoma: Liga Portuguesa Contra o Cancro. Www.ligacontracancro.pt. https://www.ligacontracancro.pt/melanoma/ Liga Portuguesa Contra o Cancro (2023d). Prevenção de cancro da pele / Skin Cancer Prevention - Escolhe Uma Vida Saudável | CHOOSE the HEALTHy way : Liga Portuguesa Contra o Cancro. Www.ligacontracancro.pt. https://www.ligacontracancro.pt/skincancer/ Nuttall, P., Fothergill, A., Hemington-Gorse, S. J., Dobbs, T. D., & Tree, J. J. (2023). Confronting the psychological challenges of skin cancer: A qualitative study investigating patient's experience of a skin cancer diagnosis and support received. *Journal of Plastic, Reconstructive & Aesthetic Surgery*, *83*, 301-304.
Total	34	

Table 1: Distribution of selected scientific articles and websites by year of publication (2003–2023).

State of the Art

There are two main types of skin cancer: melanoma and non-melanoma, the latter of which is divided into two subtypes – basal cell carcinoma and squamous cell carcinoma. Melanoma is the most serious type and presents a higher mortality rate. This type of cancer occurs when skin cells, specifically melanocytes—which produce melanin and provide skin pigmentation—become malignant. The probability of developing melanoma, similar to other cancers, increases with age; however, this disease affects people of all ages and can occur on any skin surface. Melanoma is rare in Black populations and other dark-skinned races. When melanoma spreads, cancer cells may appear in the lymph nodes; these nodes eventually absorb these cells, causing them to spread to other areas of the body, such as the liver, lungs, and brain. When this occurs, the cancer cells in the resulting tumors are still classified as melanoma, and the condition is referred to as metastatic melanoma rather than, for example, liver or lung cancer (Liga Portuguesa Contra o Cancro, 2023). Non-melanoma skin cancer arises when the systematic process of skin cell replacement malfunctions—for instance, when new cells form unnecessarily and aged skin cells do not die at the appropriate time. This excess of skin cells forms tumors or neoplasms, with only malignant ones being considered cancer. There is a risk that these cells will damage adjacent tissues and potentially spread to other parts of the body (metastasis). There are two subtypes of non-melanoma cancer: the first is basal cell carcinoma (or basalioma), which grows slowly, rarely spreads

to other areas of the body, and typically appears on the most exposed skin areas, such as the face, neck, and hands. The second type is squamous cell carcinoma, which also develops in areas of the body with higher sun exposure, though it can also appear in areas with less exposure. This type of carcinoma can reach the lymph nodes and certain organs—carcinoma metastasis (Liga Portuguesa Contra o Cancro, 2023).

Risk Factors

Risk factors for developing skin cancer include:

- Excessive exposure to ultraviolet (UV) radiation: This can damage skin cell DNA, leading to mutations that contribute to cancer development.
- Skin type: Fair-skinned individuals generally have a higher risk due to lower melanin levels.
- Family history: Individuals with a family history of skin cancer may have an increased risk, as certain genetic factors can contribute to susceptibility.
- Personal history: People with a previous history of skin cancer are more likely to develop new cases.
- Chemical exposure: Exposure to certain chemicals, such as arsenic, can increase the risk of non-melanoma skin cancers.
- Age: The risk increases with age, especially for non-melanoma cancers, though it can occur at any age.
- Geographic location: People living in areas with high UV radiation levels, particularly those closer to the equator, may face an increased risk (Liga Portuguesa Contra o Cancro, 2023).

Medical Treatments

The most commonly used medical treatments for skin cancer today are surgery (which may involve total or partial removal of the cancer), radiotherapy (which can be localized), chemotherapy, and immunotherapy (National Cancer Institute, 2019).

Statistical Data

Globally, 150,000 new cases of melanoma were recorded in 2020. The most affected countries were Australia, with 16,171 cases, followed by New Zealand, with approximately 3,000 annual cases. This type of skin cancer caused 57,000 deaths worldwide in 2020 (World Cancer Research Fund International, 2020). According to estimates from Pordata (2021), malignant tumors accounted for 22% of causes of death in Portugal in 2021—more than double the rate recorded in 1960 (9.3%). This represents 265 deaths per 100,000 inhabitants in 2021, a high figure compared to 1960 (99.2). Annually, about 12,000 new cases of skin cancer emerge in Portugal, responsible for approximately 400 deaths per year. Of these, 1,500 are new cases of melanoma, which accounts for about 250 annual deaths. According to data from the Portuguese Association of Skin Cancer (Associação Portuguesa de Cancro Cutâneo), an estimated 13,000 new cases of skin cancer are expected this year in Portugal. Regarding the Health Statistics of the Autonomous Region of Madeira (2020), at the regional level, malignant tumors are once again the second leading cause of death, with 662 deaths recorded in 2020 (374 men and 288 women). This is equivalent to 24.4% of the region's mortality (compared to 23.2% in 2019), representing a 6.4% increase over 2019 (622 deaths). Approximately 300 cases of skin cancer occur every year in Madeira. Skin cancer caused 6 deaths in the Autonomous Region of Madeira in 2020—the youngest patient was approximately 30 years old, while the oldest patient was in the 90–94 age group (Health Statistics of the Autonomous Region of Madeira, 2020).

Psycho-oncology

Cancer is one of the most common diseases in Portugal and the world, with significant implications in the physical, psychological, and social domains. Generally, it leads to a reduction in quality of life, becoming one of the primary health challenges of the 21st century. Over the last three decades, there has been growing recognition of the emotional and interpersonal repercussions of cancer and its treatments, as well as the impact on patient well-being. Research has also explored how emotional and behavioral factors can affect disease progression. These factors contributed to the emergence of a new field of study in oncology called Psycho-oncology. This discipline focuses on the psychosocial needs of patients, healthcare professionals, and the families of oncology patients. Addressing the needs of family members is particularly relevant, as literature has shown they are also at a high risk of developing mental disorders (Buchhold et al., 2020). Consequently, it is now recognized that psychosocial interventions should be an integral part of medical care provided to cancer patients, rather than being viewed as a separate form of treatment. Nonetheless, although literature demonstrates that skin cancer patients face significant psychological challenges, current healthcare systems often fail to meet these needs, as they do not receive the same attention as physical needs. Patients express a desire to be treated through a holistic and integrative approach rather than through isolated focus on their physical health, especially when facing persistent emotional challenges. This highlights the importance of restructuring services so that psycho-oncology is integrated into oncological healthcare (Buchhold et al., 2018; Nuttall, 2023). Psycho-oncologists are less concerned with the disease outcome itself, as their primary focus is on improving the patient's quality of life (Lang-Rollin & Berberich, 2018). Professional support is extremely important in cases where well-being is compromised since, according to Lepley (2022), there is a clear correlation between well-being and disease outcomes, including skin cancer. According to Meiß et al. (2018), the most common and efficient psychotherapeutic approaches for skin cancer are Cognitive-Behavioral Therapy (used in 57% of treatment centers), followed by Systemic Therapy (used in 51% of centers). The literature suggests various approaches to address the dimensions that affect the well-being and quality of life of skin cancer patients. Peters (2012) states that an efficient intervention has the potential to improve not only the patient's quality of life but also the disease outcome. Intervention studies in melanoma patients indicate that brief psychological interventions—including psychoeducation, psychotherapy, stress reduction, and coping techniques—can decrease patient distress and improve immune function (Boesen et al., 2005). Nutrition has been identified as essential for the well-being of oncology patients. A meta-analysis by Li et al. (2017) supports this idea; it analyzed 21 studies on diet and depression across 10 countries, determining that a Western dietary pattern—consisting of red meat, refined sweets, and high-fat foods—was associated with an increased risk of depression. This suggests that nutritional quality influences well-being and quality of life, potentially reducing the risk of depression in cancer patients. Physical activity is also encouraged to alleviate symptoms and improve the likelihood of a high quality of life. Mindfulness, defined as "the state of being conscious and attentive to what is happening in the present moment," has proven effective in increasing well-being and is increasingly integrated into oncological care. Literature suggests that mindfulness is related to higher levels of psychological well-being because it can prevent skin cancer patients from focusing on the past or overthinking the future, which is crucial for an unpredictable disease like cancer (Lepley, 2022). Kneier (2004)

postulated that facing the reality of the illness, maintaining hope and optimism, seeking social support, expressing emotions, adopting a participative stance, and maintaining self-esteem are some of the most useful strategies a skin cancer patient can implement to cope with their diagnosis and treatment. It is estimated that approximately one-third of cancer patients experience significant levels of distress, which also affects their families and caregivers (Liga Portuguesa Contra o Cancro, 2022). This distress and psychological suffering tend to be higher during the diagnosis and treatment phases, decreasing over time (Cornish et al., 2009).

Based on available literature, several empirically demonstrated risk factors for psychological distress have been identified. These include:

- Demographic factors: female gender, younger age, being unmarried, and lower education levels;
- Clinical factors: pronounced physical deterioration or the visibility of the affected body area;
- Psychosocial factors: negative appraisals of skin cancer and lack of social support (Kasparian et al., 2009).

Some of the most commonly affected psychological dimensions in skin cancer patients—which consequently impact their quality of life, given that quality of life and psychosocial factors are strongly associated variables (Lehto et al., 2005) include depression, anxiety, body image issues, decreased productivity, illness representations, and social support.

Approximately 25% of recently diagnosed cancer patients present symptoms of depression. Depression has been associated with functional limitations, such as the loss of independence in instrumental activities of daily living, as well as increased costs, resource utilization, reduced quality of life, and decreased adherence to clinical guidelines (Radiotis et al., 2013). Anxiety is another critical factor, as it has been linked to delays in seeking medical advice, decreased treatment adherence, increased recurrence and mortality rates, and reduced participation in skin cancer screenings and preventive behaviors (Kasparian et al., 2009). In a study by Beesley et al. (2015), three main needs emerged: support for coping with the fear of cancer spread (17%), information on recurrence risk (17%), and outcomes in case of dissemination (16%). Many patients require more detailed information and psychological support that current healthcare systems often fail to provide. Providing information aligned with specific patient needs reduces distress and improves quality of life (McInnes et al., 2008), which is particularly relevant since psychological stress may be associated with skin cancer progression (Lehto et al., 2007). Regarding illness representations, negative perceptions of the consequences and duration of the disease are associated with poorer quality of life. According to Margreet Scharloo et al. (2010), perceiving a greater number of symptoms and a longer disease duration was linked to higher levels of depressive symptoms. Physical appearance is also crucial, as skin cancer treatment often results in scarring or physical changes, especially in the head and neck region. Patients with tumors in visible areas reported higher levels of distress. A crucial factor in understanding this relationship is the importance patients place on their appearance. In the study by Radiotis et al. (2013), more than half of the sample expressed concerns regarding the size (63%) and visibility (61%) of scars, with no gender differences revealed. According to Stirling (2012), the ability to perform tasks as efficiently as before the diagnosis may be impaired. Approximately 70% of oncology patients undergoing treatment report experiencing fatigue (Berger et al., 2010). Adapting to this reality is challenging; patients often struggle to maintain their pre-diagnosis pace, which can lead to frustration and withdrawal. Finally, social support—specifically family relationships—influences quality of life. According to Weihs & Politi (2005), patients in cohesive family environments with little conflict demonstrated better coping abilities and a more positive adaptation to the illness. Satisfaction with social support has been linked to lower levels of anxiety and depression, and higher quality of life.

Skin Cancer Intervention Plan

- Target Population: Adults
  - Individuals recently diagnosed with skin cancer
- Number of Sessions: 6
- Frequency: 1 session per week (over approximately one and a half months)
- Duration: 60 minutes, except for the first session which lasts 1 hour and 30 minutes.
- Format: Individual intervention
- Approach: Each session is an adaptation of Cognitive-Behavioral Therapy (CBT) techniques.

THRIVE Intervention Plan

Session 1: Establishing the Therapeutic Alliance

Duration: 1 hour 30 minutes

Objectives:

- Establish the therapeutic relationship.
- Create a safe therapeutic environment: In this first interaction, it is crucial to create a safe and clear setting so that information can be received and questions can emerge.
- Present the main aspects of the intervention plan.
- Define problems and goals.

Tasks:

- Informed Consent.
- Introduction to CBT: Explain the practical aspects (e.g., duration, use of homework/tasks) and ethical/legal boundaries.
- Establishing Rapport: Use non-directive counseling techniques, empathy, and biographical exploration to understand the patient's life history and current emotional state.
- Problem List and Goal Setting: Identify primary concerns and set realistic, achievable goals to help the client feel less overwhelmed and regain a sense of control.

Homework: Complete the problem list and define potential goals if not finished during the session (Ordem dos Psicólogos, 2021; Moorey & Greer, 2012).

Session 2: Psychoeducation

Duration: 60 minutes

Objectives:

- Provide psychoeducation regarding skin cancer and debunk associated myths.
- Educate the client on common emotional reactions to a cancer diagnosis to normalize their feelings.

Tasks:

- Review homework from the previous session.

- Presentation of content on skin cancer and its psychological impact.
- Emphasize available treatments—focusing on a hope-based perspective (Conceição & Bueno, 2020).

Session 3: Managing Anxiety

Duration: 60 minutes

Objectives:

- Learn to cope with anxiety related to the diagnosis and illness.
- Identify intrusive and distorted thoughts and provide coping strategies (e.g., thoughts related to mortality).
- Provide relaxation strategies for use inside and outside the therapeutic context.

Tasks:

- Assess emotional state and current anxiety coping mechanisms.
- Decatastrophizing Technique: Use Socratic questioning to re-evaluate anxious thoughts, realign thinking patterns, and reduce emotional impact.
- Diaphragmatic Breathing Technique.

Homework: Practice the diaphragmatic breathing technique during the week (Beesley et al., 2015; Kasparian et al., 2009).

Session 4: Dealing with Depressive Thoughts and Feelings

Duration: 60 minutes

Objectives:

- Assess emotional state, support network, and current depressive symptoms.
- Connect the client to their "rational side" to understand the drivers of depression.
- Provide strategies to manage depressive symptoms.

Tasks:

- Feedback on previous homework.
- Rational-Emotional Role-Play: The client plays the "rational" part of their mind while the therapist plays the emotional/negative part. This helps the client argue against negative thoughts and gain emotional distance.

Homework: Coping Cards. Write motivational and realistic phrases on cards to be placed in visible locations to reduce dysfunctional negative thoughts (Conceição & Bueno, 2020).

Session 5: Managing Physical Changes and Body Image

Duration: 60 minutes

Objectives:

- Address reduced productivity and challenges in performing daily tasks.
- Cope with changes in physical appearance and low self-esteem.

Tasks:

- Feedback on homework.
- Discussion on physical changes (fatigue, productivity, and appearance).
- Graded Task Assignment: Collaboratively create a "step-ladder" of tasks from easiest to most difficult to restore a sense of efficacy and control.

Homework: "Friendly Mirror" Technique. Direct hopeful and self-affirming phrases to oneself in the mirror to strengthen self-esteem (Moorey & Greer, 2012; Radiotis et al., 2013).

Session 6: Reflection and Maintenance

Duration: 60 minutes

Objectives:

- Review the evolution of psychological symptoms.
- Reflect on internal resources and strategies developed and how to maintain them.
- Tasks:
- Self-Assessment of the Process: Reflective questions on emotional/behavioral achievements and comparison with initial expectations.

• Discussion on activated internal resources (Conceição & Bueno, 2020).

Follow-up Session

- Assess psychological symptoms compared to the end of the 6-session plan.
- Evaluate maintenance of progress or potential setbacks.
- Identify any newly emerging needs.

Conclusion

Throughout this review, a recurring issue was the negative connotations associated with skin cancer and its treatment, which could be minimized through the acquisition and transmission of reliable information by healthcare professionals. For instance, patients undergoing radiotherapy often report lower quality of life scores compared to oncology patients who do not receive it. This may be due to the negative connotation that words like "radiation" or "radiotherapy" hold for many cancer patients, who may have misconceptions about the safety of this treatment. This leads to apprehension regarding its efficacy and side effects—an incorrect perception, given that radiotherapy is a highly successful treatment for carcinoma (Lepley, 2022). Consequently, it is of high importance for healthcare providers to work toward shifting the reputation of radiotherapy, ensuring that patients feel confident in its efficacy and experience less worry and stress. Another issue worth addressing concerns body image; it is crucial for professionals to inform patients about potential side effects, such as changes in physical appearance that may manifest over time, while also striving to help manage both the physical and psychological dimensions of the patient's experience (Almeida et al., 2023). Another relevant factor to consider is the role of climate change in skin cancer. Despite efforts to mitigate it, the ozone layer is not yet fully restored, and its thickness remains depleted; consequently, more ultraviolet (UV) radiation reaches the population. This increased exposure is associated with a higher risk of developing skin cancer, as UV rays can damage skin cell DNA, potentially leading to the development of cancerous cells. Parker (2020) suggests that for every 1% decrease in ozone layer thickness, there is a predicted 1% to 2% increase in melanoma and a 3% to 4.6% increase in carcinoma. Furthermore, according to Monsell et al. (2021), climate change—

including events such as floods and droughts—has direct effects on mental health, exacerbating various psychological disorders.

Since prevention is a key factor in reducing skin cancer cases, it is highly relevant to adopt new strategies to effectively communicate this to the general population. Potential strategies include:

- Public campaigns: Focusing on the importance of sun protection and regular skin checks for early detection, utilizing various communication channels like social media, television, and print to reach all age groups.
- School education: Teaching the risks of sun exposure, the importance of sunscreen, and how to perform self-examinations.
- Community awareness programs: Offering free screenings and outreach.
- Professional collaboration: Encouraging dermatologists and general practitioners to discuss sun safety during consultations.
- Digital technology: Leveraging mobile applications to disseminate information and reminders about sun protection measures.

Finally, this review highlighted a lack of prospective studies in this research area. Future studies are indispensable, specifically those focused on the routine assessment of psychological distress in skin cancer patients and the implications these assessments may have on the adequacy and orientation of the psychological services provided.

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