

Unmasking Denial in Symptomatology: Delving into the Psychological, Sociocultural, and Contextual Factors of Denial of Patient Symptoms

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Abstract

Background: Symptom denial is a multifaceted response, intricately woven with individual psychology, societal pressures, and environmental cues. This Narrative review delves into this complexity, spotlighting the critical role of a patient's mindset in determining their acceptance or denial of a disease.

Objectives: The literature aims to elucidate the denial of symptoms and its various underlying factors to make healthcare more inclusive of these variations in patient presentations.

Methods: A literature search was conducted across the PubMed database, and hand searches were done on Google Scholar to acquire literature based on SANRA guidelines with structured inclusion and exclusion criteria.

Results: The culmination of this exploration underscores the intricate nature of symptom denial, revealing its multifaceted origins within individual psychology, societal norms, and the broader environment. Denial emerges not as a monolithic reaction but as a nuanced interplay of coping mechanisms, cultural beliefs, socioeconomic factors, and health literacy.

Discussion: Acknowledging these complexities is vital for tailored healthcare approaches. By unraveling the layers of denial, we pave the way for informed interventions that respect diverse perspectives and foster improved symptom acknowledgment, ultimately enhancing overall well-being and patient outcomes.

Keywords: Denial, Sociocultural factors, Psychological factors, Mental health response

Introduction

In the complex and intricate healthcare landscape, how individuals perceive, acknowledge, and respond to symptoms forms a fundamental aspect of the patient experience. The phenomenon of symptom denial, a nuanced interplay of psychological, sociocultural, and contextual factors, is a complex and multifaceted aspect within this broader tapestry.

At the core of this exploration lies an examination of psychological factors that influence how individuals navigate the acceptance or denial of their health conditions. The intricate dance between the patient's mindset and the trajectory of disease acceptance or denial becomes pivotal. Whether observed in the adaptive mechanisms developed by individuals living with chronic diseases or the profound emotional challenges faced during the recovery from ailments like hip fractures, denial emerges as an integral psychological defense mechanism [1,2]. Its role extends beyond a mere coping strategy, often easing the anxiety tied to the disease, sometimes due to a lack of comprehensive information or as an unconscious response to rebut reality [3].

The tapestry of symptom denial extends its threads into the rich fabric of sociocultural influences. Cultures, beliefs, and societal expectations weave together to shape how individuals interpret and respond to their symptoms. From the "demonization concept" influencing perceptions of epileptic behavior to linguistic equivalence altering the subjective experience of symptoms, sociocultural factors play a defining role in the diverse expressions of symptom denial [4-9]. Cultural nuances dictate not only the manifestation of denial but also impact healthcare-seeking behaviors, with gender roles, ethnic concordance, and societal stigmatization influencing the categorization of experiences as normal or abnormal [9-11].

Embedded within this exploration are the contextual factors that contribute to the intricate tapestry of symptom denial. Socioeconomic status, access to quality

healthcare, and health literacy unfold as crucial determinants shaping the responses to symptoms. The limitations of resources, financial constraints, and disparities in health literacy are hurdles that individuals may face when attempting to navigate the complex healthcare landscape [12-14]. The very ability to obtain, process, and understand basic health information becomes a key factor influencing the trajectory of symptom denial.

As we embark on this journey to unravel the intricacies of symptom denial, our goal is to gain a holistic understanding of how these psychological, sociocultural, and contextual factors intersect and influence the lived experiences of individuals facing health challenges. By peeling back the layers of this intricate tapestry, we seek to shed light on the diverse expressions of symptom denial and pave the way for targeted interventions and informed healthcare strategies.

Methodology

This review was conducted according to the Scale for Assessment of the Narrative Review Articles (SANRA) [15].

A research question was framed using PICO which was the basis of our search strategy which included the following terms:

1. ("denial, psychological"[MeSH Terms] OR ("denial"[All Fields] AND "psychological"[All Fields]) OR "psychological denial"[All Fields] OR "denial"[All Fields] OR "denials"[All Fields]) AND "disbelief" [All Fields] AND ("psychologic"[All Fields] OR "psychological" [All Fields] OR "psychologically" [All Fields] OR "psychologization" [All Fields] OR "psychologized" [All Fields] OR "psychologizing" [All Fields])
2. ("denial, psychological"[MeSH Terms] OR ("denial"[All Fields] AND "psychological"[All Fields]) OR "psychological denial"[All Fields] OR "denial"[All Fields] OR "denials"[All Fields]) AND ("chronic disease"[MeSH Terms] OR ("chronic"[All Fields] AND "disease"[All Fields]) OR "chronic disease"[All Fields] OR ("chronic"[All Fields] AND "illness"[All Fields]) OR "chronic illness" [All Fields])

3. ("denial, psychological"[MeSH Terms] OR ("denial"[All Fields] AND "psychological"[All Fields]) OR "psychological denial"[All Fields] OR "denial"[All Fields] OR "denials"[All Fields]) AND ("covid 19"[All Fields] OR "covid 19"[MeSH Terms] OR "covid 19 vaccines"[All Fields] OR "covid 19 vaccines"[MeSH Terms] OR "covid 19 serotherapy"[All Fields] OR "covid 19 nucleic acid testing"[All Fields] OR "covid 19 nucleic acid testing"[MeSH Terms] OR "covid 19 serological testing"[All Fields] OR "covid 19 serological testing"[MeSH Terms] OR "covid 19 testing"[All Fields] OR "covid 19 testing"[MeSH Terms] OR "sars cov 2"[All Fields] OR "sars cov 2"[MeSH Terms] OR "severe acute respiratory syndrome coronavirus 2"[All Fields] OR "ncov"[All Fields] OR "2019 ncov"[All Fields] OR ("coronavirus"[MeSH Terms]

4. ("denial, psychological"[MeSH Terms] OR ("denial"[All Fields] AND "psychological"[All Fields]) OR "psychological denial"[All Fields] OR "denial"[All Fields] OR "denials"[All Fields]) AND ("psychologie" [All Fields] OR "psychologies" [All Fields] OR "psychology" [MeSH Subheading] OR "psychology"[All Fields] OR "psychology" [MeSH Terms] OR "psychology s"[All Fields])

5. "socioeconomic factors" [MeSH Terms] OR ("socioeconomic" [All Fields] AND "factors" [All Fields]) OR "socioeconomic factors" [All Fields] OR "socioeconomics" [All Fields] OR "socioeconomic" [All Fields] OR "socioeconomical" [All Fields] OR "socioeconomically" [All Fields]) AND ("class" [All Fields] OR "classe" [All Fields] OR "classed" [All Fields] OR "classes" [All Fields]) AND ("denial, psychological" [MeSH Terms] OR ("denial" [All Fields] AND "psychological" [All Fields]) OR "psychological denial"[All Fields] OR "denial" [All Fields] OR "denials" [All Fields]) AND ("delivery of health care" [MeSH Terms] OR ("delivery" [All Fields] AND "health" [All Fields] AND "care" [All Fields]) OR "delivery of health care"[All Fields] OR "healthcare" [All Fields] OR "healthcare s" [All Fields] OR "healthcares" [All Fields])

6. ("cultural competency" [MeSH Terms] OR ("cultural" [All Fields] AND "competency" [All Fields]) OR "cultural competency" [All Fields]

OR ("cultural" [All Fields] AND "competence" [All Fields]) OR "cultural competence" [All Fields]) AND ("microaggression" [MeSH Terms] OR "microaggression" [All Fields] OR "microaggressions" [All Fields]) AND ("denial, psychological" [MeSH Terms] OR ("denial" [All Fields] AND "psychological" [All Fields]) OR "psychological denial" [All Fields] OR "denial" [All Fields] OR "denials" [All Fields]) AND ("delivery of health care" [MeSH Terms] OR ("delivery" [All Fields] AND "health" [All Fields] AND "care" [All Fields]) OR "delivery of health care" [All Fields] OR "healthcare" [All Fields] OR "healthcare s" [All Fields] OR "healthcares" [All Fields]) AND ("sexual and gender minorities" [MeSH Terms] OR ("sexual" [All Fields] AND "gender" [All Fields] AND "minorities" [All Fields]) OR "sexual and gender minorities" [All Fields] OR "lgbtq"[All Fields]) AND ("communal"[All Fields] OR "communalism" [All Fields] OR "communalities" [All Fields] OR "communality" [All Fields] OR "communally" [All Fields] OR "commune"[All Fields] OR "communes" [All Fields] OR "community s" [All Fields] OR "communities" [All Fields] OR "residence characteristics" [MeSH Terms] OR ("residence" [All Fields] AND "characteristics" [All Fields]) OR "residence characteristics" [All Fields] OR "communities" [All Fields] OR "community" [All Fields])

The study selection was conducted based on our objectives with the manuscript upon employing simple selection criteria.

Inclusion:

- Systematic reviews, observational studies (with an internal comparison group), qualitative studies, and case reports.

Exclusion:

- Narrative reviews, conference abstracts, and editorials

- Studies with English as not the primary language

- Studies that did not specify the course of denial

The screening was conducted and extracted data shaped the manuscript. Google AI

BARD (now Gemini) was used in conducting searches on Google Scholar as well.

Aspects that cause denial of patient's symptoms

Psychological factors

The patient's mindset is momentous in navigating through acceptance or denial of a disease. Adapting to and living with chronic disease is intricate, involving ongoing adjustments as the condition advances. Individuals face emotional challenges and develop coping mechanisms over time to establish a psychological defense [1].

Denial, among these mechanisms, effectively eases anxiety tied to the disease. Sometimes, it is observed simply because of a lack of comprehensive information about a disease. This was noticed in the case of COVID-19 where lack of awareness of relevant evidence leads to the extraction of various conclusions [3]. Besides, denial can be an unconscious coping mechanism used to rebut reality.

Geriatric patients recovering from hip fractures experience prolonged healing periods and tailored rehab plans, which can lead to frustration. This might trigger unrealistic self-expectations and denial, prompting tasks beyond recovery limits, and elevating fall risk and well-being decline [2]. The tendency of harm can be elevated due to these thought processes.

A study that compared two groups with cancer observed that a positive perspective is a distractive strategy that helps to decline distress. Patients who were in denial experienced fewer physical symptoms in contrast to patients who did not deny the disease and experienced noxious physical symptoms due to increased emotional reaction [16]. Contrastingly, in another study done by Vos MS *et al.*, the author found avoidance of information can be related to poorer social functioning. Denial of feelings associated with cancer was related to better social functioning [16].

Chronic diseases not only manifest in physical deterioration but also a decline in

psychological well-being which leads to denial. In a study by Shulamith Kreitler, the author states that denial is enhanced by the anxiety evoked by cancer. Anxiety that rises above a certain level triggers denial [17].

A patient diagnosed with Multiple Sclerosis might be forced to confront intense emotions like denial, anger, and depression. Embracing treatment becomes challenging due to harsh disease realities. Denial manifests as disbelief in doctors' accuracy, prolonged treatment necessity, or hope for spontaneous recovery, often reinforced by supportive friends and family [18].

In a study by White *et al.* with 105 participants, adults with Acquired Congenital Heart Disease (ACHD) displayed significant scores on the adapted Cardiac Denial Index. This tendency, attributed to lifelong illness experience, leads ACHD patients to underestimate their conditions' impact and believe in better endurance exemplified in them. Interestingly, in adults suffering from congenital heart disease, denial of illness predicted poor adherence to cardiac care follow-up; and those minimizing severity were less likely to attend appointments [19].

Another study provided some meaningful insights into brain tumor patients; psychological awareness and its impact on the caregiver. The study proposed that denial might heighten as the prognosis worsens. Brain tumor patients, compared to caregivers and control groups, underestimated psychological deficits. Significantly, patient denial heightened caregiver anxiety, affecting their relationship. Addressing this dynamic is vital when providing psychological support to patients and families [20].

In patients with pre-existing mental illnesses such as depression, denial is used to cope with the declaration of another disease. To support this, a study named "Cardiac Denial and Expectations Associated With Depression in Adults With Congenital Heart Disease" showed that denial was seen in patients with clinical depression who used denial to ignore enduring the effects of

cardiac disease [21]. Furthermore, it was observed that paramount denial was used in patients who possess more control over their health and contain a sense of invulnerability [22].

Sociocultural Factors

The impact of sociocultural factors on the denial of symptoms can be demonstrated by the fact that certain cultures that contain the “demonization concept” may consider epileptic behavior as supernatural and regard it with condemnation [4].

Linguistic equivalence of the same symptoms can change as the subjective experience remains elusive [5]. According to Zola IK, reporting of physical and psychological symptoms is lower in Mexican culture, compared to the American one due to the influence of folk beliefs and practices [5,6].

Traditional Chinese cultures show a disaffection to the emotional displays of pain hence they tend to display nonverbal symptoms of pain, especially when compared to Euro Canadians. Child-rearing practices of various cultures also have an influence. In certain cultures, we can observe a “snowballing phenomenon” where multiple constellations of symptoms accumulate due to the denial of earlier symptoms. Moreover, the ethnic concordance of the observer and the member affected the results, where the Chinese displayed less verbalization of pain to Euro-Canadian observers [7-9]. Culture influences the categorization of experiences as normal or abnormal. Moreover, hospitalized patients have a denial of their medical illness [9].

Rastogi P (2014) noted that South Asians often perceive depression as a social/moral problem or as a negative reaction to an adverse situation rather than as a disease that requires professional treatment, hence physicians are less likely to refer them to specialized mental health services [10].

There is an association of gender as well where biological, individual, and social factors of gender roles determine the denial of symptoms and help-seeking behavior [9].

In a study conducted on depression, it was evaluated that 75% of the women seek help whereas 75% of the men die by committing suicide in the same year. Since the women's rights movement, there has been a rapid change in society where men don't have a defined role leading to a sense of loss of identity, feelings of helplessness, and the patriarchal mindset that does not favour the expression of such emotions. Whereas social stigmatization of TB in the Pakistani population has led to underreporting due to the fear of diminished marriage prospects which is common in females compared to males. There is evidence that in some cases denial can be protective. Such as Chinese culture is protective of depression to a certain extent due to a long-standing tradition of withstanding hardships While Western cultures may excessively pathologize certain human experiences [9, 11].

This further extends to the denial of mental illness and fear of the derogatory adjectives for patients with mental illness, moreover, the relatives of the patient refrained from labeling their relatives as having a mental illness and acknowledged that a formal diagnosis would result in an official label, associated with negative stereotypes. Due to fear of an official label, relatives adopted at least four coping behaviors: external attribution, excusing, secrecy, and denial. First, participants felt a distinct sense of discomfort acknowledging that their relatives suffered from a mental illness and were more at ease attributing their behaviors to external factors. The findings of this paper suggest that due to the coping mechanisms adopted by families, there may be a raised threshold for treatment initiation which might ultimately lead to treatment delay [23].

In an article about mental health in athletes, it was observed that There is a common response that the disease represents a personal failure, a loss of willpower, and a character defect, and is a problem of which one is ashamed and hides. Patients reject the implications of loss of control, diminished vitality, and inadequate coping skills that both diagnoses carry.

The results have shown that South Asians with mental illness who often do not report depressive symptoms, are less likely to be referred by physicians to specialized mental health services, and often do not go to the emergency room for help. Karasz (2005) noted that South Asians often perceive depression as a social/moral problem or as a negative reaction to an adverse situation rather than as a disease that requires professional treatment [10]. A firm idea of how a diagnosis can have a negative social stigma and affect the life of a person can be obtained from a focus group study of tuberculosis patients in Sialkot, Pakistan. The study shows that TB is perceived as a very dangerous, infectious, and incurable disease. This perception has many social consequences: stigmatization and social isolation of TB patients and their families; diminished marriage prospects for young TB patients, and even for their family members; TB in one of the partners may lead to divorce. Due to fear patients often deny the diagnosis and reject the treatment.

Most participants confirmed that TB can harm the chances of getting married. This appears to be more often true for females than for males. In Pakistan, marriages are usually arranged by the families of the couple. Expenses for both families are high. Once a son or a daughter is known to have TB, it becomes difficult to find a suitable partner for him or her. Even after being successfully cured, the girl's or boy's prospects of marriage remain diminished [24].

Contextual factors

Various contextual factors such as socioeconomic status, access to quality healthcare, and cultural competency of the providers may contribute to the denial of symptoms. This may lead to the use of home remedies for their symptoms, which in turn may lead to the worsening of symptoms and may necessitate drastic measures such as hospitalization to deal with the complications arising due to the delay in seeking treatment.

Limitation of resources may be a hindrance to seeking healthcare across the globe. This

might be more prevalent in people living in rural areas where the predominant section of the population belongs to a lower socioeconomic class. An Indian survey found that 17% of people who reported illness in some rural areas did not seek care, over a quarter of whom cited financial reasons [12].

The total direct and indirect expenses of receiving care can be crushing when the household economy is already stressed due to illness. People could be forced to postpone or skip professional medical care, opting instead for self-care or unofficial care. For instance, the findings of household surveys in rural China showed that between 35% and 40% of people who claimed to have a disease had not sought medical attention, with the poor citing financial issues as the primary excuse [12].

Health literacy is the degree to which individuals can obtain, process, and understand basic health information and services needed to make appropriate health decisions [13].

Whereas health disparity is a type of difference in health that is closely linked with social or economic disadvantage. Groups of people who have consistently faced significant social or economic health barriers are negatively impacted by health inequalities. These barriers are caused by traits historically associated with exclusion or discrimination, such as race or ethnicity, religion, financial status, gender, mental health, sexual orientation, or native status. Other traits include a physical, sensory, or cognitive handicap [14].

Low health literacy has both immediate and long-term effects. Indications or a lack of medication errors are examples of direct consequences. Although indirect effects are more challenging to quantify, they may include insurance problems, healthcare access, and unhealthy behaviors. Low health literacy can hinder people from achieving their goals in life and cause them to experience social and economic disadvantages [13].

The ability to demonstrate taking medications as directed, the ability to interpret labels and health messages, and, among elderly people, worse overall health status and higher mortality rates were all consistently linked to low health literacy [26]. People with LHL are less likely to receive screening and preventative treatments and are more likely to have health and access inequities than those with appropriate HL. Patients with LHL are more likely to have inadequate abilities and strategies for treating their disease, as well as lower knowledge of their disease processes, drug regimens, and medication adherence. Communication between a doctor and a patient is harmed by LHL. Patients with LHL are more likely to say that their interactions with their doctor are not empowering or useful, and they are also more likely to utilize a passive communication style with them. They are also less likely to participate in collaborative decision-making [14].

The effect of financial constraints on healthcare is very evident in children from families belonging to lower-income groups, particularly in conditions such as Type 1 Diabetes and Diabetic Ketoacidosis. For T1D patients under the age of 18, a retrospective population-based cohort study was carried out utilizing electronic medical record (EMR) data from Cincinnati Children's Hospital from January 1, 2011, to December 31, 2017. High-poverty neighborhoods and youth with T1D who were covered by public insurance had considerably higher admission rates for DKA [26].

Total pre-hospital delay, decision time, and home-to-hospital delay time were observed and recorded among patients and it was seen that younger patients had a shorter home-to-hospital delay; patients who contacted the EMS for help had shorter total pre-hospital delays; also patients who had a bystander when the symptoms started, had a shorter decision time as compared to those that were alone at home [26].

A lot of patients at the onset of their symptoms, would get in touch with someone, even if the patient had previously

experienced a stroke or were aware that they were having one, their comprehension of the urgency with which a reaction was needed was restricted, and they placed greater value on getting approval from others, which caused an increase in the delay in decision making [27].

Elderly subjects showed a prolonged per-hospital time delay probably due to more difficulties getting up. Females showed more association with this type of delay. Patients' interpretation of symptoms is an important source of delay in reaching the hospital following the onset of symptoms [28]. Medical trauma refers to a subjective level of psychological and physical distress arising from the medical setting, including diagnostic and procedural experiences, and interactions with personnel and the environment (Hall & Hall, 2016). Previous poor experience in the medical care setup could lead to medical trauma. Painful vaccine experiences lead to fear and noncompliance in older children [29].

Patients may be reluctant to visit a doctor when they have symptoms due to cultural ineptitude and a lack of adequate training on the provider's part. The fear of having to see behavior that would be humiliating or that might be in opposition to their cultural and religious beliefs may be the cause of this. A cross-sectional study (HealthCaring) was conducted to evaluate the level of LGBT cultural competency in cancer and primary care among healthcare professionals from 16 counties in East Tennessee.

This study found that, despite the doctors' belief that they should treat all patients equally, they were engaging in LGBT microaggressions, which may harm LGBT patients and make them reluctant to seek medical care in the future out of fear of being mistreated [30].

A beneficial step in lowering fear and establishing a good rapport between the doctor and the patient may include training for healthcare providers regarding cultural competency.

Results

Psychological factors

The examination of psychological factors reveals denial as a multifaceted coping mechanism. Whether observed in the context of chronic diseases or during recovery from specific conditions like hip fractures, denial emerges as a nuanced strategy with far-reaching consequences [16].

The delicate balance between psychological defense mechanisms and physiological responses becomes evident, shedding light on the intricate interplay between the mind and the body.

Sociocultural Factors

Symptom denial, deeply rooted in sociocultural contexts, manifests diversely across different cultures and gender roles.

From the "demonization concept" influencing perceptions of epilepsy to the influence of culture on the categorization of experiences as normal or abnormal, sociocultural factors paint a nuanced portrait of symptom denial [4,7-9].

These findings underscore the complex interplay between cultural beliefs, societal expectations, and individual responses to illness.

Contextual Factors

Within the mosaic of contextual factors, socioeconomic status, access to healthcare, and health literacy emerge as pivotal influencers. The impact of financial constraints on healthcare-seeking behaviors becomes apparent, underscoring the challenges faced by individuals in lower-income groups [12]. Health literacy, a crucial determinant of effective healthcare decision-making, adds another layer of complexity to the understanding of symptom denial [13,14].

Discussion

Understanding the intricacies of symptom denial unveils a tapestry of challenges and opportunities for targeted interventions.

Psychosocial interventions aimed at fostering a positive mindset while acknowledging illness may mitigate the adverse effects associated with denial. Culturally competent healthcare approaches become imperative to bridge gaps in care, fostering a more inclusive and effective healthcare system [30].

Integrating mental health support within healthcare systems and enhancing health literacy could alleviate the burden associated with symptom denial [23]. The implications extend beyond individual well-being to the broader healthcare landscape. Future research endeavors should delve deeper into cultural dynamics, exploring strategies for promoting mental health awareness and dismantling barriers to seeking timely healthcare. In essence, the tapestry of symptom denial is woven with threads of psychology, culture, and context, presenting both challenges and opportunities for a more nuanced understanding of individual responses to illness.

References

1. Telford K, Kralik D, Koch T. Acceptance and denial: implications for people adapting to chronic illness: literature review. *J Adv Nurs.* 2006;55(4):457-464. PMID: 16866841. <https://doi.org/10.1111/j.1365-2648.2006.03942.x>
2. Proctor R, Wade R, Woodward Y, et al. The impact of psychological factors in recovery following surgery for hip fracture. *Disabil Rehabil.* 2008;30(9):716-722. PMID: 17852291. <https://doi.org/10.1080/09638280701403536>
3. Thagard P. The cognitive science of COVID-19: Acceptance, denial, and belief change. *Methods.* 2021;195:92-102. PMID: 33744395. <https://doi.org/10.1016/j.ymeth.2021.03.009>
4. Walker AE. The current status of epilepsy in some developing countries*. *Epilepsia* [Internet]. 1972 Jan 1;13(1):99-106. <https://doi.org/10.1111/j.1528-1157.1972.tb04556.x>
5. Zola IK. Culture and Symptoms--An analysis of patient's presenting complaints. *American Sociological Review* [Internet]. 1966 Oct 1;31(5):615. <https://doi.org/10.2307/2091854>
6. Angel R, Thoits P. The impact of culture on the cognitive structure of illness. *Cult Med Psychiatry.* 1987;11(4):465-494. PMID: 3319427. <https://doi.org/10.1007/bf00048494>
7. Hsieh AY, Tripp DA, Ji LJ. The influence of ethnic concordance and discordance on verbal reports and nonverbal behaviours of pain. *Pain.* 2011;152(9):2016-2022. PMID: 21616598.

<https://doi.org/10.1016/j.pain.2011.04.023>

8. Anderson KO, Green CR, Payne R. Racial and ethnic disparities in pain: causes and consequences of unequal care. *J Pain*. 2009;10(12):1187-1204. PMID: 19944378.

<https://doi.org/10.1016/j.jpain.2009.10.002>

9. Parker G, Gladstone G, Chee KT. Depression in the planet's largest ethnic group: the Chinese. *Am J Psychiatry*. 2001;158(6):857-864. PMID: 11384889.

<https://doi.org/10.1176/appi.ajp.158.6.857>

10. Rastogi P, Khushalani S, Dhawan S, et al. Understanding clinician perception of common presentations in South Asians seeking mental health treatment and determining barriers and facilitators to treatment. *Asian J Psychiatr*. 2014;7(1):15-21. PMID: 24524704.

<https://www.sciencedirect.com/science/article/abs/pii/S1876201813003006>

11. Beilin R. Social functions of denial of death. *Omega - Journal of Death and Dying* [Internet]. 1982 Feb 1;12(1):25-35. <https://doi.org/10.2190/yyhn-7pfe-6bn0-xcvd>

12. Whitehead M, Bird P. Breaking the poor health-poverty link in the 21st Century: do health systems help or hinder?. *Ann Trop Med Parasitol*. 2006;100(5-6):389-399. PMID: 16899144.

<https://doi.org/10.1179/136485906x97363>

13. Karimi S, Keyvanara M, Hosseini M, Jazi MJ, Khorasani E. The relationship between health literacy with health status and healthcare utilization in 18-64 years old people in Isfahan. *J Educ Health Promot*. 2014;3:75. Published 2014 Jun 23. PMID: 25077168.

<https://pubmed.ncbi.nlm.nih.gov/25077168>

14. Schillinger D. The Intersections Between Social Determinants of Health, Health Literacy, and Health Disparities. *Stud Health Technol Inform*. 2020;269:22-41. PMID: 32593981.

<https://pubmed.ncbi.nlm.nih.gov/32593981>

15. Baethge C, Goldbeck-Wood S, Mertens S. SANRA-a scale for the quality assessment of narrative review articles. *Res Integr Peer Rev*. 2019;4:5. Published 2019 Mar 26. PMID: 30962953.

<https://doi.org/10.1186/s41073-019-0064-8>

16. Vos MS, de Haes JC. Denial in cancer patients, an explorative review. *Psychooncology*. 2007;16(1):12-25. PMID: 16868929. <https://doi.org/10.1002/pon.1051>

17. Kreitler S. Denial in cancer patients. *Cancer Investigation* [Internet]. 1999 Jan 1;17(7):514-34. <https://doi.org/10.3109/07357909909032861>

18. Kalb R. The emotional and psychological impact of multiple sclerosis relapses. *J Neurol Sci*. 2007;256 Suppl 1:S29-S33. PMID: 17350045.

<https://doi.org/10.1016/j.ins.2007.01.061>

19. White KS, Pardue C, Ludbrook P, Sodhi S, Esmaeeli A, Cedars A. Cardiac Denial and Psychological Predictors of Cardiac Care Adherence in Adults With Congenital Heart Disease. *Behav Modif*. 2016;40(1-2):29-50. PMID: 26538274. <https://doi.org/10.1177/0145445515613329>

20. Andrewes HE, Drummond KJ, Rosenthal M, Bucknill A, Andrewes DG. Awareness of psychological

and relationship problems amongst brain tumour patients and its association with carer distress. *Psychooncology*. 2013;22(10):2200-2205. PMID: 23508923. <https://doi.org/10.1002/pon.3274>

21. Huntley GD, Tecson KM, Sodhi S, et al. Cardiac Denial and Expectations Associated With Depression in Adults With Congenital Heart Disease. *Am J Cardiol*. 2019;123(12):2002-2005. PMID: 30967286. <https://doi.org/10.1016/j.amjcard.2019.03.011>

22. Perkins-Porras L, Whitehead DL, Strike PC, Steptoe A. Causal beliefs, cardiac denial and pre-hospital delays following the onset of acute coronary syndromes. *J Behav Med*. 2008;31(6):498-505. PMID: 18830812. <https://doi.org/10.1007/s10865-008-9174-3>

23. Möller-Leimkühler AM. The gender gap in suicide and premature death or: why are men so vulnerable?. *Eur Arch Psychiatry Clin Neurosci*. 2003;253(1):1-8. PMID: 12664306 <https://doi.org/10.1007/s00406-003-0397-6>

24. Liefoghe R, Michiels N, Habib S, Moran MB, De Muynck A. Perception and social consequences of tuberculosis: a focus group study of tuberculosis patients in Sialkot, Pakistan. *Soc Sci Med*. 1995;41(12):1685-1692. PMID: 8746868. [https://doi.org/10.1016/0277-9536\(95\)00129-u](https://doi.org/10.1016/0277-9536(95)00129-u)

25. Maxwell AR, Jones NY, Taylor S, et al. Socioeconomic and Racial Disparities in Diabetic Ketoacidosis Admissions in Youth With Type 1 Diabetes. *J Hosp Med*. Published online August 18, 2021. PMID: 34424192.

<https://doi.org/10.12788/jhm.3664>

26. Perkins-Porras L, Whitehead DL, Strike PC, Steptoe A. Pre-hospital delay in patients with acute coronary syndrome: factors associated with patient decision time and home-to-hospital delay. *Eur J Cardiovasc Nurs*. 2009;8(1):26-33. PMID: 18635400. <https://doi.org/10.1016/j.ejcnurse.2008.05.001>

27. Mackintosh JE, Murtagh MJ, Rodgers H, Thomson RG, Ford GA, White M. Why people do, or do not, immediately contact emergency medical services following the onset of acute stroke: qualitative interview study. *PLoS One*. 2012;7(10):e46124. PMID: 23056247.

28. Berton G, Cordiano R, Palmieri R, Guarnieri G, Stefani M, Palatini P. Clinical features associated with pre-hospital time delay in acute myocardial infarction. *Ital Heart J*. 2001;2(10):766-771. PMID: 11721721. <https://pubmed.ncbi.nlm.nih.gov/11721721/>

29. Christou-Ergos M, Leask J, Wiley K. How the experience of medical trauma shapes Australian non-vaccinating parents' vaccine refusal for their children: A qualitative exploration. *SSM - Qualitative Research in Health* [Internet]. 2022 Dec 1;2:100143. <https://doi.org/10.1016/j.ssmqr.2022.100143>

30. Patterson JG, Jabson Tree JM, Kamen C. Cultural competency and microaggressions in the provision of care to LGBT patients in rural and appalachian Tennessee. *Patient Educ Couns*. 2019;102(11):2081-2090. PMID: 31208771. <https://doi.org/10.1016/j.pec.2019.06.003>