



Effect of light triad, meaning in life on level of life satisfaction among health care workers: A comparative study

Annie Mewara

Geetanjali Medical College And Hospital, Udaipur

Abstract

The pursuit of life satisfaction and well-being has garnered significant attention within the fields of positive psychology and well-being research. This study explores the relationship between life satisfaction, the Light Triad personality traits (Kantianism, Humanism, and Faith in Humanity), and the sense of meaning in the lives of healthcare professionals. The objectives were to determine the level of life satisfaction among postgraduate, M.Sc. Nursing, MPT, and PharmD students, and analyse the effect of light triad, meaning in life on life satisfaction among healthcare professionals. A cross-sectional research was done, collecting data through online questionnaires administered to $n = 120$. The findings support the hypotheses that life satisfaction positively correlates with meaning in life, and light triads. However the present study fails to find any difference between levels of life satisfaction among healthcare professionals. The study acknowledges limitations in terms of generalizability, bias and sampling technique, and recommends further research to address these limitations and explore additional factors like technology, and employ different methods to enhance the research.

Keywords: COVID-19, comparative study, light triad, kantianism, humanism, faith in humanity, meaning in life, dark triad, life satisfaction, well-being, healthcare professionals, subjective well-being

Introduction

The meaning in life is whatever you ascribe it to be. Being alive is the meaning.

- Joseph Campbell

In the intricate tapestry of human experience, the pursuit of life satisfaction has long been a central focus of psychological inquiry. As individuals traverse the myriad challenges and opportunities presented by their personal and professional lives, the intricate interplay of various factors shapes their overall sense of contentment and fulfilment. In recent years, the fields of positive psychology and well-being.¹³³ research have shed light on the significance of certain personality traits and existential considerations in influencing one's perception of life satisfaction. Notably, the concepts of the Light Triad and meaning in life have garnered substantial attention due to their potential influence on various aspects of human experience.

The quest for meaning in life, often considered a fundamental aspect of human existence. Meaning serves a variety of important functions in people's lives⁵⁵. For starters, first, meaning gives our lives meaning. Second, it provides values or standards against which we can judge our actions. Third, it provides us with a sense of control over the events of our lives. Finally, it gives us a sense of self-worth. According to Heintzelman and King⁷², finding meaning in life is about having a sense of relevance, coherence, and purpose in one's life. According to a growing body of studies, finding meaning in life is a basic human need that has a significant impact on both psychological and physical health¹⁹¹. People who believe their lives are significant tend to have longer, healthier, and happier lives than people who don't share this belief. The importance of meaning in life for people is becoming acknowledged, but experts have mostly disregarded how meaning affects larger community wellbeing. We are all looking for meaning, for a sense that our lives are more than the sum of their parts. Fortunately, humans are resourceful; we have an infinite number of ways to find meaning and an infinite number of potential sources of meaning. We can find meaning in any situation, event, occurrence, or context. We can find meaning in the sublime, in the absurd, in the dull and dreary, and in the perfectly wretched in life (Positive Psychology, 2018). People who think they understand the significance of their lives are happier than those who don't. In a study¹³⁸ suggested that participants who agreed with the statement "*I have a philosophy of life that helps me understand who I am*" had less depressive symptoms and had higher positive affect. Psychologists¹⁸⁰ refer to awareness of your life's significance as "presence," and the desire to find it as "search." They are not mutually exclusive: Depending on whether you already have a feeling of meaning or not, you may or may not search. Some persons with low presence choose not to look because they are "stuck." Some people are quite present, yet they still look for things; we can call them "seekers." The correlation between presence and happiness is strong, but search doesn't appear to matter; in fact, obsessing over your life's purpose may make you unhappy. Take into account how people experience the paradox of choice when there are too many options available for purchasing something. Or even in a relationship: A study by Wu and Chiou²⁰⁷ published in the academic journal *CyberPsychology and Behaviour sums up the entire study*: "More Options Lead to More Searching and Worse Choices in Finding Partners for Romantic Relationships Online." Even though I am unaware of any studies that have particularly looked at the matter, we can assume that peripatetic

meaning-seekers would experience similar difficulties. In *The Journal of Positive Psychology*, Martela and Steger¹¹⁰ explained:

1. Coherence: the harmony of events. This is the realisation that everything in your life occurs for a purpose. That doesn't necessarily imply you can incorporate new information into your story at the time it occurs, but you generally can, so you have faith that you will eventually.
2. Purpose: Goals and ambitions exist for a purpose. This is the idea that you are alive so that you can act. Consider purpose as your own personal mission statement, such as "I am here to spread love abundantly" or "The purpose of my life is to share the secrets to happiness."
3. Significance: The intrinsic worth of life is significant. You can feel like your life matters in this way. If you have a lot of significance, you're sure that without you, the world would be a little bit—or maybe a lot—poorer.

Long recognised by academics as a crucial psychological need, meaning in life. People experience general good psychological well-being to a greater extent the more significant they feel¹⁷⁹. Furthermore, meaning lowers the risk of depression, addiction, and suicide (e.g., Disabato et al.,⁴⁵; Edwards and Holden,⁵⁰; Kinnier et al., 1994). According to Czekierda et al. (2017), meaning is also favourably correlated with physical health and longevity.

"What's one less person on the face of the earth, anyway?" – Ted Bundy (as quoted in Leyton, 2003).

Each of us possesses both a positive and negative side. The degree to which we constantly display light vs. dark patterns of thoughts, feelings, and behaviours in our day-to-day lives varies for each of us, though. Numerous "dark traits" that are linked to unethical, immoral, and socially unwelcome ideas and behaviours have been the subject of a flurry of empirical research over the past 15 years (Moshagen et al., 2018). According to an emerging consensus (Jones and Figueredo, 2013; Marcus et al., 2018; Moshagen et al., 2018), the "dark core" (or so-called "heart of darkness") of these dark traits consists of an antagonistic social strategy that is marked by high levels of interpersonal manipulation and callous behaviour. The "light triad" describes the characteristics of a caring person who is concerned about others. Higher levels of life satisfaction are linked to the light triad. They're the kind of people who get along with others, contribute, and are almost everything a well-functioning society requires. In general, the light triad was related to being primarily motivated by intimacy and self-transcendent values. Many character strengths correlated with the light triad, including curiosity, perspective, zest, love, kindness, teamwork, forgiveness and gratitude.

Life satisfaction is the degree to which a person positively evaluates the overall quality of his/her life as a whole. In other words, it means how much the person likes the life he/she leads (Veenhoven, 1996). Life satisfaction

(LS) is the way in which people show their emotions, feelings (moods) and how they feel about their directions and options for the future. It is a measure of well-being assessed in terms of mood, satisfaction with relationships, achieved goals, self-concepts, and self-perceived ability to cope with one's daily life. It involves a favourable attitude towards one's life—rather than an assessment of current feelings.

Healthcare professionals, who shoulder the responsibility of safeguarding the health and welfare of others, encounter a distinctive array of stressors and demands that can profoundly impact their personal well-being (Townsley et al., 2023). The healthcare domain, characterised by critical decision-making, extended working hours, and emotional exertion, can potentially disrupt the delicate equilibrium between personal and professional spheres. Consequently, the exploration of factors that contribute to the life satisfaction of healthcare professionals holds not only academic significance but also practical implications for patient care quality and the overall welfare of these dedicated individuals.

In the realm of healthcare, where the well-being of patients is of paramount concern, the vitality of the professionals who administer care cannot be understated. As they navigate the intricate web of responsibilities and pressures inherent to their roles, the symbiotic relationship between personal contentment and the delivery of quality healthcare becomes evident. This study embarks on a journey to underlie the life satisfaction of healthcare professionals, shedding light on the role that the light triad and meaning in life play in shaping their psychological well-being. Through a comprehensive analysis, this investigation strives to enrich our comprehension of the psychological dimensions that interlace with healthcare practitioners' satisfaction with life, thereby fostering a deeper understanding that could potentially augment both their individual fulfilment and the enhancement of healthcare services as a whole.

Rationale

In today's demanding healthcare environment, the well-being of healthcare workers is of paramount importance, given its profound implications for patient care and overall societal well-being. The proposed research aims to delve into the interplay between life satisfaction, light triad, and the sense of meaning in the lives of healthcare workers. By employing established measurement tools such as the Satisfaction With Life Scale (SWLS), Light Triad Scale (LTS), and Meaning in Life Questionnaire (MLQ), this study seeks to uncover invaluable insights into the holistic well-being of health care professionals.

Medical students, in particular, face a myriad of challenges, including the strenuous demands of their educational journey (Densen, 2011), which often result in increased burnout (IsHak et al., 2013). The documented universal phenomenon of burnout in the medical profession emphasises the urgency of understanding its impact, not only on students' personal well-being but also on the quality of care they provide. From previous research (Kadadi, 2020), it is clear that poor life satisfaction among medical students can translate into inferior health

outcomes and compromised patient care. This study aims to extend this understanding by evaluating postgraduate students specialising in different healthcare disciplines (M.Sc. Nursing, MPT, and PharmD) to comprehensively gauge the spectrum of life satisfaction within the healthcare workforce.

The concept of the Light Triad, encompassing Kantianism, Humanism, and Faith in Humanity, has been identified as a potent determinant of an individual's satisfaction with their relationships, as well as their personal sense of competence and autonomy (Kaufman et al., 2019). By exploring the influence of the Light Triad on the life satisfaction of healthcare workers, this study acknowledges the significance of these attributes in promoting a positive psychological framework within a demanding professional context.

Furthermore, the pursuit of a Meaningful Life, as a central construct in positive psychology (Seligman, 2011), underscores the importance of life's purpose, fulfilment, and overall satisfaction (Ackerman, 2018). Within the healthcare sector, where the daily responsibilities often involve profound interactions with human life (Soler-Gonzalez et al., 2017), the concept of a meaningful life takes on a heightened significance. By investigating the relationship between meaning in life and life satisfaction among healthcare workers, this research aims to highlight the nuanced interconnections between personal fulfilment, professional purpose, and overall well-being.

Life satisfaction stands as a pivotal indicator of an individual's holistic assessment of their own life and represents a vital component of happiness and subjective well-being (Kadadi, 2020). In the medical context, understanding life satisfaction is pivotal for assessing the quality of life of healthcare workers, evaluating social progress, and identifying conditions conducive to a fulfilling life. Previous research has demonstrated a dearth of comprehensive studies examining the life satisfaction of medical students (Kadadi, 2020), thus creating an imperative for the present study to fill this gap.

Hypothesis

H1: The level of meaning in life has a significant positive influence on life satisfaction among healthcare students (PG, M.Sc. Nursing, MPT and Pharm D students).

H2: The light triad traits (Humanism, Kantianism, and Faith in Humanity) have a significant positive effect on life satisfaction among healthcare students (PG, M.Sc. Nursing, MPT and Pharm D students).

H3: There is a significant difference in the level of life satisfaction among postgraduate healthcare students (M.Sc. Nursing, MPT, and PharmD).

Background

Dedicated to ensuring people's wellbeing and health, healthcare professionals serve as a fundamental pillar of contemporary society. However, they frequently experience high levels of stress and burnout due to the demanding nature of their jobs and the complexity of the healthcare environment. Health professionals, according to research, are highly susceptible to burnout (Al-Ghunaim et al., 2021; Hosseini et al., 2022; Khatatbeh et al., 2021; Shaikh et al., 2022). Many medical professionals claim to have experienced burnout at some point in their careers. Burnout symptoms include constant physical or emotional exhaustion, being easily irritated or frustrated, being unable to concentrate or think clearly, and sleeping too much or too little. The COVID-19 pandemic intensified these experiences (Caruso et al., 2021; Medeiros et al., 2021; Zhang et al., 2020).

The development of efficient and simple to use strategies that enhance the well-being of healthcare workers has gained more attention as a result of the increased occupational stressors facing the industry (Shanafelt, 2021). The COVID-19 pandemic has had negative effects on the healthcare workers mental health and wellbeing, which have been well-documented and thoroughly researched. Although high levels of anxiety, depression, and burnout among doctors and other healthcare professionals are by no means a new phenomenon, the pandemic's extreme conditions have significantly exacerbated this well-known phenomenon. Increased anxiety, depression, insomnia, and low self-efficacy are results of increased patient loads, long and irregular work hours, an unprecedented fall in employment early in the pandemic (Hoedl et al., 2021), and patient mistrust (Dyrbye et al., 2022).

The value of well-being among healthcare professionals

The health of physicians and other healthcare professionals is crucial to the delivery of quality medical care. The quality of patient care is undoubtedly impacted by stress and work overload, which also have an impact on healthcare professionals health and wellbeing. Studies have conclusively demonstrated that the health of healthcare professionals enhances patient satisfaction, care quality, and productivity (Health, 2011).

Health professionals who have more control over their time may experience less stress (Benson et al., 2016; Campo et al., 2009; Hale et al., 2006; Long et al., 2013). However, there is a lot of pressure on nurses and doctors to spend less time with patients and more time on administrative tasks, despite the negative effects this has on their health (Shanafelt and Noseworthy, 2016; VITAL WorkLife, 2015). Profitability objectives are a major force behind this transition from caring to administrative tasks. A workforce that is mentally healthy can also be justified from a business perspective. This is especially true of training programmes for health professionals. The clinical setting, which has occasionally been called toxic, has an impact on students (Braithwaite et al., 2017).

Taking care of a provider's mental health has a direct impact on how well they can care for their patients. Additionally, burnout among healthcare providers has an impact on other workers in the field because "physicians and staff dissatisfaction feed on each other" (Bodenheimer and Sinsky, 2014). The interconnection between provider satisfaction and patient care prompted Bodenheimer and Sinsky to suggest that the Triple Aim (improve population health, enhance patient experience, and reduce costs) be expanded to include a Fourth Aim of "improving the work life of health care clinicians and staff."

The emergence of COVID-19 era

The occupational stress and well-being of healthcare workers in the COVID-19 era have been the subject of numerous studies. According to the majority of studies, the COVID-19 outbreak led to an increase in psychological symptoms in healthcare workers, including anxiety, depression, somatic symptoms, and burnout. Pressures on healthcare workers include a heavy workload, the perception that COVID-19 is severe, predictable supply shortages, the inability to provide competent medical care, worries about infection, and concerns for the health and safety of patients and family members (Babore et al., 2020; Cai et al., 2020; Chirico et al., 2021; Chirico and Nucera, 2020; Gorini et al., 2020; Huang et al., 2020; Lal et al., 2020; Lancee et al., 2008; Lázaro-Pérez et al., 2020; Martínez-López et al., 2020; Magnavita et al., 2021; Salazar de Shanafelt et al., 2020; Sonnentag, 2018; Pablo et al., 2020; Zhao et al., 2020).

The cost to our medical staff was concerning, due to COVID. COVID has caused thousands of them to pass away. More than half of healthcare professionals report (Prasad et al., 2021) burnout symptoms, and many also struggle with issues related to their mental health, such as insomnia, depression, anxiety, or post-traumatic stress disorder (Bryant-Genevier, 2021). Although burnout appears in specific people, it is fundamentally a systemic problem. Additionally, the crisis of health worker burnout existed before COVID-19. The inability to give patients the care they require results in moral injury. Other causes include a lack of support, increasing workloads and administrative burdens, a history of underinvestment in public health infrastructure, and inadequate funding. Long hours are not the only factor in burnout.

An analysis of 11 studies that evaluated the psychological health of healthcare professionals during the COVID-19 pandemic was done by Vizheh et al. (2020) in a systematic review. These studies demonstrated that a number of variables were linked to the mental stress that healthcare workers experienced. Higher stress and psychological disturbance were significantly linked to working in environments with a high infection rate. According to earlier studies, disasters have a serious negative impact on the mental health of medical responders. It has been discovered that nurses report more negative outcomes than doctors, such as depression and PTSD. Lack of social support and communication, unhealthy coping mechanisms, and inadequate training are significant risk factors for the emergence of negative psychological outcomes in a variety of disaster types (Naushad et al., 2019). Two reviews (Heath et al., 2020; Waris Nawaz et al., 2020; emphasise the significance of striking a balance between

one's needs and those of others and suggest self-care as the first line of defence for healthcare professionals to handle the demands of COVID-19 patient care, the persistence of the crisis, and its disruption of regular life routines.

Health professionals' motivational goals and the mission to serve are fundamentally at odds with one another. We cannot let the communities that health workers serve and ourselves as a nation fail. We must continue down this path, resolutely challenging the status quo, bureaucratic inertia, and entrenched interests. Health professionals from all over the nation have informed me that they are at their breaking point and that "something has to change." They are accurate. May our nation never forget its moral duty to look out for those who have given so much to look out for us (Murthy, 2022).

Purpose of life

According to Hill et al. (2010), having clear goals and a life direction constitutes having a purpose in life. Although they are somewhat similar, many of us mistakenly believe that life's purpose and meaning are the same thing. More specifically, it's believed that having a purpose in life or adopting behaviours that are motivated by a purpose are just a few factors that go into leading a meaningful life. Humans (King et al., 2006; Schulenberg et al., 2008; Wong and Fry, 1998) place great importance on the experience of meaning, which has grown to be one of the central tenets of both the positive psychology movement (Wong and Fry, 1998) and the field of health promotion. Meaning has generally been found to be a significant psychological factor that promotes wellbeing (Bonebright et al., 2000; Fry, 2001; Melton and Schulenberg, 2008) and shields people from unfavourable outcomes (Pearson and Sheffield, 1989) as well as a strong individual predictor of life satisfaction (Morgan and Farsides, 2007; Peterson et al., 2005; Seligman, 2002). In terms of psychological health, meaning appears to act as a mediating factor (Chan, 2009; Halama and Dědová, 2007; Ho et al., 2010; Holahan et al., 2008; Kleftaras and Psarra, 2012).

There is a difference between (1) the meaning of life and (2) the meaning of life in literature. The first idea relates to the issue of the general significance of human existence. Numerous existential philosophers, including Soren Kierkegaard, Albert Camus, and Friedrich Nietzsche, have discussed this issue in order to examine whether and how the existence of humans has meaning over time. The second concept focuses on the individual's perceived meaning in life; the question is scaled back to ask whether you believe your own personal life is meaningful rather than on the more abstract and universal meaning of human life. The health literature has recently begun to pay more attention to this subject, which has become of interest to psychologists, nurses, and other health professionals. Nevertheless, finding meaning in life is a subjective and unique phenomenon that is challenging to define (Haugan and Dezutter, 2021).

Quality of Life among health care workers

The WHO (1993) defines quality of life as a person's perception of their place in life in relation to their goals, expectations, standards, and concerns as well as the culture and value systems in which they live. This definition emphasises the idea that a person's quality of life is individualised, encompasses both positive and negative facets of life, and has multiple dimensions. The practice of medicine is demanding and stressful, despite the fact that it can be meaningful and personally fulfilling. High levels of work-related stress, which are known to increase the risk of poor quality of life, are typical of hospitals (Chang et al., 2007; Jonsson and Halabi, 2006; Hamaideh et al., 2008; Sherman et al., 2006) According to study findings, a large number of healthcare professionals suffer from professional burnout, a syndrome characterised by emotional exhaustion, depersonalization, and a lack of pride in one's own achievements (Shanafelt et al., 2009; Spickard, Jr, 2002). The results of recent studies indicate that burnout may undermine professionalism, affect the standard of patient care, raise the possibility of errors, and encourage early retirement, despite being challenging to accurately measure and quantify (Balch et al., 2011; Dyrbye et al., 2010; Shanafelt et al., 2010; Shanafelt et al., 2011; Wallace et al., 2009). Additionally, it appears that burnout has negative effects on a person's personal life, including relationships that end in divorce, problematic alcohol and other substance use, and suicidal thoughts (Shanafelt et al., 2003; Shanafelt, 2011). Typically, they express frustration over their inability to finish their work to their standards and wish to leave the nursing profession (Hegney et al., 2003). Physicians are not only role models for the general public when it comes to eating habits and alcohol use, but their own health habits may also have an impact on the advice they give to patients (Frank, 2000; Young et al., 2001). Studies have shown that 40%–60% of patients with depression go undiagnosed or untreated by their doctors (Ford et al., 1995; Luoma et al., 2002; Mann et al., 2005). Additionally, and in line with this, 40% of people who commit suicide call their primary care doctor within a month of doing so, but this does not get the treating doctor's attention or prompt them to take the necessary action (Lockley et al., 2004). Finally, a growing body of research indicates that physicians who are depressed or mentally ill unintentionally put patients at risk of harm. This is especially true of physicians who are depressed (Fahrenkopf et al., 2008; West, 2009). A prospective and observational study found that burnt-out medical residents did not exhibit the same pattern of medication errors, despite being six times more likely to commit medication errors than depressed residents. According to a review published in the *Lancet*, doctors' mental health issues represent a significant and underappreciated political health factor because their wellbeing appears to be an underappreciated quality indicator of all healthcare systems (Wallace et al., 2009).

The lack of studies on how the COVID-19 pandemic affects people's professional and personal lives, including the quality of life of healthcare workers, has been highlighted by earlier research (Testoni et al., 2021). In a systematic review of COVID-19's effects, Melo-Oliveira et al. (2020) found evidence of decreased quality of life (QoL) among participants from Italy, China, Saudi Arabia, and Vietnam, among other countries. In addition to the absence of physical disease, perceived quality of life also refers to a person's subjective assessment of their

psychological, social, and environmental circumstances (World Health Organisation, 1996). Despite the fact that more studies on the quality of life of healthcare workers have been published since Melo-Oliveira et al. (2020) published their systematic review, these studies have revealed a sizable portion of healthcare workers with low health-related QoL who are affected by depression, anxiety, stress, poor self-perceived mental health status, insomnia, and working in COVID-19-designated hospitals during the COVID-19 pandemic, little is known about how the COVID-19 pandemic affects the various domains of QoL (physical health, psychological, social relationship, and environmental QoL) (Amerio et al., 2020; An et al., 2020; Celmeçe and Menekay, 2020; Manh Than et al., 2020; Stojanov et al., 2020; Suryavanshi et al., 2020).

Chiu et al. (2007) conducted research on 1534 clinical nurses in Taiwan regarding their workability and how it relates to their quality of life. Measures like enhancing young nurses' capacity to handle the mental demands of the job and enhancing job design to lessen physical workload for senior nurses were recommended for enhancing and maintaining the workability of nurses. Delmas and Duquette (2000) looked at the relationships among hardiness, coping mechanisms, and quality of life at work for French nurses working in intensive care units. They also looked at how coping mechanisms mediated the relationship between hardiness and quality of life at work. Regression analysis revealed that the relationship between a sense of commitment, a sense of mastery, and quality of life at work could be mediated by problem-solving coping techniques.

Light Triad

"I still believe, in spite of everything, that people are truly good at heart." – Anne (Frank, 1995) (1947/, p. 332).

Since Seligman (1999) and Seligman and Csikszentmihalyi (2000) first promoted positive psychology as a shift in psychological research towards a scientific examination of human virtues and strengths, it has been 20 years (Sheldon and King, 2001). This movement was sparked by "a negative bias" in psychological theory and research, i.e., an excessive focus on psychopathology and curing illness ("the disease model") rather than on personal development (Sheldon and King, 2001; Snyder and Lopez, 2001). According to proponents of positive psychology, psychological science has not adequately studied some positive human traits like gratitude, love, inspiration, or curiosity (Gable and Haidt, 2005).

A concept of three malevolent traits that combined to form a so-called "Dark Triad" of personality traits was proposed by Paulhus and Williams (2002) around the same time that this shift to positive psychology began gaining supporters. These characteristics include psychopathy, Machiavellianism, and narcissism. The Dark Triad attracted a lot of attention in the years that followed and prompted a lot of papers linking these traits to various anti-social and undesirable behaviours, such as manipulation in the workplace context (Jonason, Slomski, and Partyka, 2012), scholastic cheating (Williams, Nathanson, and Paulhus, 2010), stealing friends from others (Jonason, Li, and Buss, 2010), bullying in adults (Baughman, Dearing, Giammarco, and Vernon, 2012), aggression and delinquency,

sexual misbehaviour, interpersonal difficulties (Muris, Merckelbach, Otgaar, and Meijer, 2017), etc. The dark triad has already received extensive research. The dark triad of personality consists of narcissism (entitled self-importance), Machiavellianism (strategic exploitation and deceit), and psychopathy (callousness and cynicism), and was first identified by Paulhus and Williams (2002). We are all at least a little bit narcissistic, Machiavellian, and psychopathic, despite the fact that these three characteristics have traditionally been studied primarily among clinical populations (such as criminals). Paulhus and Williams (2002) demonstrated that each of these characteristics is clearly on a continuum.

Sadism, a fourth dark trait that has only recently joined the Dark Triad, has been called the Dark Tetrad (Buckels, Jones, and Paulhus, 2013; Chabrol, Van Leeuwen, Rodgers, and Séjourné, 2009; Međedović and Petrović, 2015; Paulhus, 2014). According to Međedović and Bulut (2017), sadism is the tendency to experience pleasurable feelings while inflicting harm on others or witnessing their suffering. It was discovered to positively correlate with juvenile delinquency (Chabrol et al., 2009), playing violent video games (Greitemeyer, 2015), hurting others without provocation and without discernible benefits (Buckels et al., 2013), and internet trolling (Buckels, Trapnell, and Paulhus, 2014). Sadism has established its validity as an additional dark trait (Bulut, 2017), correlating not only with criminal attitudes (Međedović and Kovačević, 2021), aggressive humour, negative attitudes towards immigrants (Međedović and Bulut, 2017), or problematic social media use (Kircaburun, Jonason, and Griffiths, 2018), but also with delinquent behaviour (Chabrol et al., 2009), bullying (van Geel, Goemans, Toprak, and Vedder, 2017), or hurting other living beings (Buckels et al., 2013) independent from the Dark Triad, but also with criminal attitudes (Međedović and Kovačević, 2020), aggressive humour, negative attitude towards immigrants (Međedović and Bulut, 2017), or problematic social media use (Kircaburun, Jonason, and Griffiths, 2018).

Since Paulhus and Williams (2002) initial paper, the amount of research on the subject has grown significantly yearly, with two-thirds of the dark triad's publications appearing in just the years 2014 and 2015 (Muris et al., 2017). There is enough similarity among these "socially aversive" traits, despite the fact that each member of the dark triad has distinctive characteristics and correlates, that Paulhus has argued that they "should be studied in concert (Paulhus, 2014)." The "dark core" of personality does indeed seem to exist. What about the lighter side of human nature? Research on dark personalities has undoubtedly helped us understand the darker side of human nature and how each of us differs in the degree to which we consistently exhibit dark patterns of thoughts, feelings, and behaviours in our daily lives (Kaufman, 2019).

Each and every one of us possesses both a good and a bad side. The degree to which each person consistently displays light and dark patterns of thoughts, feelings, and behaviours in daily life, however, varies. The phrase "light triad of personality" describes a collection of three interconnected personality traits that are more frequently displayed by people who are generally more likely to exhibit "light" patterns of thoughts,

feelings, and behaviours in their daily lives. The three virtuous qualities that make up the "light triad" were identified by the psychologists Kaufman et al. (2019) as Kantism, Humanism, and Faith in Humanity. Our research revealed three distinct factors, which we named Kantianism (treating individuals as ends in themselves rather than merely as means), Humanism (valuing the dignity and worth of each individual), and Faith in Humanity (believing in the inherent goodness of people). They contend that each of these can aid social scientists in comprehending the characteristics that define someone as noticeably "good." Both positive and negative personality traits exist in every human. The way that each person's thought, behaviour, and dark and light emotional patterns interact with one another is what distinguishes them from one another (Kaufman, 2019). The life circumstances that have been linked to the development of the light and dark triad personality traits differ as well. For instance, it has been discovered that dark triad traits are associated with the exact opposite of what light triad traits are, namely greater childhood unpredictability, aggression, utilitarian moral judgement, selfishness, power, money, and immature defence styles (Malik et al., 2020).

Nickerson (2023) suggested that additionally, there is a clear gender distinction between those who display dark and light triad traits. In addition to being more likely to be male, younger, and more motivated by power, sex, achievement, and affiliation, people with high levels of dark triad traits also tend to value self-enhancement, have immature coping mechanisms, indulge in conspicuous consumption, and exhibit selfishness. The dark triad is associated with embracing and depriving curiosity, whereas the light triad is associated with stretching curiosity. Despite the fact that both the light and dark triads are associated with curiosity, the types of curiosity are distinct. When one's curiosity is stretched, they are more likely to experiment, take chances, and try new things, even if they run the risk of failing. Since it can result in personal development and novel experiences, this kind of curiosity is frequently regarded as positive. On the other hand, embracing curiosity is linked to a readiness to partake in activities that are frowned upon or dangerous. Since it can result in harm or reckless behaviour, this kind of curiosity is frequently perceived as negative. The two different types of curiosity can exist in both the light and dark triads (Malik et al., 2020), which is significant to note.

Life Satisfaction

The Latin word *satisfactiō*, which means contentment or doing enough, is the root of the English word satisfaction. It is characterised as expressing happiness and optimism and fulfilling or satisfying feelings, wishes, and sentiments. Life satisfaction is a subjective assessment of one's quality of life and well-being, according to Ed Diener, a pioneer in the field of positive psychology (Diener, 1984). One is said to fully accept and embrace their life circumstances if they are happy with their lot in life. It can be argued that a person's means of support significantly affect the quality and satisfaction of their life. This can change over time because a person who starts a job may later in life have different opinions and attitudes about it. For instance, a young man beginning his career with the intention of earning respect might become more concerned with money later in life when he is responsible for supporting a family and has additional responsibilities (Wijayatunga, 2021).

For the majority of people, work is a necessary component of life, and since it provides satisfaction, it can help people feel happier overall. According to the literature, one's capacity to pursue goals, values, and beliefs is correlated with their level of job satisfaction (Gallagher et al., 2015). Satisfaction with life is one of the elements directly linked to the occurrence of occupational burnout. Although there are numerous definitions of "life satisfaction" in the literature, they do not all mean the same thing. It is assumed that this idea refers to successfully ageing and a positive opinion of one's living situation, which can also be a sign of overall health (Prason and Chaturvedi, 2016).

Many people believe that working in the healthcare industry will be very fulfilling psychologically because social and religious beliefs view it as a kind and admirable deed. This isn't always the case, though, as the demanding and time-consuming nature of the work in this field puts an individual under a lot of stress. Additionally, even though the third decade of the twenty-first century has just begun, there is still room for improvement in the nation's healthcare system. Healthcare workers have reportedly expressed dissatisfaction with their low pay, subpar facilities, particularly in rural areas, and a lack of career advancement opportunities (De Silva et al., 2013). For many years, researchers have been interested in the topic of life satisfaction among healthcare professionals. However, much more research needs to be done in this area, particularly with regard to Sri Lanka's private healthcare system. Private healthcare services have evolved into a crucial component of the healthcare system in Sri Lanka as a result of the population's expanding demands (Pallegedara and Grimm, 2017). Private healthcare services in this country are profit-driven and range from small private practices run by doctors outside of regular working hours to sizable private hospitals that offer more advanced treatment, particularly for middle- and upper-class populations. It has been noted that a number of variables, including job type, age, education level, income, perceived social support, and work stress, are important predictors of life satisfaction for healthcare workers. For instance, studies show that primary healthcare workers' life satisfaction, particularly that of doctors and consultants, is typically higher than that of other workers because those professions are regarded as prestigious and highly sought-after professional careers (Martin, 2019).

According to research (Liang et al., 2015; Singh et al., 2018; Teixeira-Poit et al., 2017), younger healthcare workers have lower satisfaction due to low salaries and relatively longer working hours, which are associated with less work experience. On the other hand, older healthcare professionals frequently have more professional experience. As a result, they are more stable and confident in the practice of medicine. Additionally, they have a greater degree of professional autonomy, which increases life satisfaction. Greater life satisfaction has been observed among healthcare workers with more educational qualifications since they have access to more reputable and well-paying jobs than those without (Amaike, 2014; De Neve and Ward, 2017; Powdthavee et al., 2015; Singh et al., 2018). Additionally, studies suggest that higher-income healthcare professionals frequently have greater job security and access to better facilities, which may again contribute to greater life satisfaction (Mirfarhadi et al., 2013).

Aside from the primary healthcare providers, research shows that other healthcare professionals are frequently underpaid and undervalued. These relative pay and income differences have a significant negative impact on the satisfaction of these professionals (Himmelstein and Venkataramani, 2019; Pillay and Mahlati, 2008). According to reports, healthcare workers who earn low wages become dissatisfied and lose motivation, which leads to them looking for better-paying positions. Their relationships at work and their morale may also be impacted by the wage gap. Furthermore, research on social support shows that it enhances mental health, job satisfaction, and productivity while also enhancing the home and work environments, family relationships, and productivity (Hou et al., 2020; Śliwiński et al., 2014; Yang et al., 2019). According to studies (Behzadfar et al., 2018, Harikandei, 2017, and Mikkola et al., 2018), social support not only lowers stress levels but also strengthens healthcare workers' professional identities and has a positive impact on their cognitions, behaviours, and coping mechanisms, all of which improve their quality of life and sense of fulfilment.

Workplace stress has become a long-standing issue, even in the healthcare sector, affecting not only white-collar employees like consultants and doctors but also blue-collar employees like attendants, ambulance drivers, and other minor staff (Gaszynska et al., 2014). Although working with the vulnerable population is a rewarding career choice that offers a stimulating workplace, it can also have drawbacks, including burnout, physical and emotional exhaustion, a decline in productivity due to work overload, long working hours, stressful working conditions, and job pressure (Doğan et al., 2012; Uchmanowicz et al., 2019; Wang et al., 2019). Such problems can negatively impact the life satisfaction of healthcare professionals, which may lead to high absenteeism, frequent job changes, and poor service quality (Domagała et al., 2018; Gallagher et al., 2015; Mahmood et al., 2019; Özgirgin, 2012; Papathanasiou et al., 2015).

The Interconnection

Meaning in life and Life Satisfaction

A meaningful life is best understood from the perspective of the person who is living it, so "meaning" is typically assessed through interviews or self-report surveys. There is growing empirical support for the connection between a person's health and well-being and their sense of meaning and purpose in life. Cross-sectional and longitudinal research consistently establishes a link between the presence of meaning and wellbeing, regardless of the exact operationalization. According to studies by Compton, Smith, Cornish, and Qualls (1996), Steger and Kashdan (2007), Steger, Oishi, and Kashdan (2009), and Zika and Chamberlain (1987), people with a sense of purpose and meaning report higher levels of life satisfaction, more positive emotions, optimism, and self-esteem. As reported by Battista and Almond (1973), Newcomb and Harlow (1986), and Weinstein and Cleanthous (1996), they are less likely to experience psychological issues.

How does the meaning of life evolve? Nobody has a sense of purpose from birth. It can be challenging to learn, find, or create meaning (Baumeister and Vohs, 2002; Frankl, 1965). As an illustration, Bonanno, Papa, and Lalande (2005) discussed how trying to make sense of traumatic events can impair adjustment. More generally, finding meaning in life is associated with positive psychological outcomes like life satisfaction, whereas searching for meaning is frequently associated with negative psychological outcomes like depression (Steger, Frazier, and Oishi; 2006; Steger et al., 2009). These findings are somewhat expected given that when people are struggling, they may look for meaning (Thompson and Janigian, 1988).

According to Baumeister (1991), Reker and Wong (1988), Ryff and Singer (1998), and Yalom (1980), meaning in life is typically described as a sense of coherence or understanding of existence, a sense of purpose in one's life, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfilment. It is assumed that cognitive processes underlie meaning in life. According to Wong (1998), the cognitive component of meaning in life includes beliefs in moral laws, the afterlife, and the existence of a higher purpose for life. According to Bering's (2003) theory, a set of cognitive abilities, such as the ability to attribute meaning and purpose to experiences and recognise intentionality in one's own life, enable people to find meaning in their lives. Additionally, individual differences in life meaning have been identified in earlier studies. People differ, for instance, in how much they consider and look for meaning in life (Mascaro and Rosen, 2008).

Optimism and Well-Being

According to Schutte, Valerio, and Carrillo (1996), optimism has an affective nature and is a personality disposition. According to Scheier and Carver (1985), optimism is the generalised expectation of positive versus negative outcomes in significant areas of life. Optimism is viewed as an affective personality trait in this study. The affective outlook on life of a person serves as the operationalization of optimism. According to Miller (1991), the affective dimension of personality refers to individual variations in the intensity of emotional responses to ordinary events. Human ability to envision a happy future is reflected in optimism (Reker, 1997). According to Carver and Scheier (2005), optimism and pessimism refer to generalised expectations that more or less cover a person's entire life space. Both cross-sectional and longitudinal studies have discovered links between optimism and happiness. For instance, optimism was linked to life satisfaction, low negative emotions, low depression, and self-esteem (Wrosch and Scheier, 2003). Ben-Zur (2003) discovered that among adolescents, optimism was positively associated with positive affect and negatively associated with negative affect.

Rodriguez, Aguerro- Flores, Blanco, Agurcia, and Midence, (2021), conducted a study to determine the influence of Moral Injury and Light Triad (LT) personality traits on anxiety and depression symptoms of health-care personnel during the COVID-19 pandemic. In their study, they found that a hierarchical regression model determined that Moral Injury, but not Light Triad traits, significantly affected depression symptoms. The overall model accounted for 42.6% of the variance in depression scores. On the other hand, anxiety symptoms were

significantly predicted by Moral Injury, as did LTS-Humanism. The model accounted for 38.2% of the variance in anxiety scores.

The study conducted by Dezutter, Casalin, Wachholtz, Luyckx, Hekking, and Vandewiele (2013) aimed to investigate 2 dimensions of meaning in life--Presence of Meaning (i.e., the perception of your life as significant, purposeful, and valuable) and Search for Meaning (i.e., the strength, intensity, and activity of people's efforts to establish or increase their understanding of the meaning in their lives)--and their role for the well-being of chronically ill patients. Results supported 4 distinguishable profiles (High Presence High Search, Low Presence High Search, High Presence Low Search, and Low Presence Low Search) with specific patterns in relation to well-being and acceptance. Furthermore, the results provided some clarification on the nature of the Search for Meaning process by distinguishing between adaptive (the High Presence High Search cluster) and maladaptive (the Low Presence High Search cluster) searching for meaning in life.

Contrastingly, the pattern of correlations with the light triad provided an overall picture that was very different from the dark triad. Being older, being female, and having less unpredictable childhood behaviour were all associated with the light triad. It was also associated with higher levels of spirituality, religion, life satisfaction, acceptance of others, belief that others are good, belief that one is good, compassion, empathy, openness to experience, conscientiousness, positive enthusiasm, having a quiet ego, and the belief that one can continue to live through nature and biosociality (having children) after one's own death (Kaufman, 2019).

The Light Triad and Life Satisfaction

Life satisfaction is a significant, complex construct that has undergone extensive research. This concept was initially usually seen through a more philosophical lens. However, as it can significantly affect how one experiences emotion and makes behavioural decisions, psychologists later started to empirically investigate this construct (Pavot and Diener, 2008). Life satisfaction is "a global assessment of a person's quality of life according to [his or her] chosen criteria," according to Shin and Johnson (1978) (p. 478). It is now regarded as a part of Subjective Well-Being, which distinguishes between the cognitive and affective aspects of happiness (Diener et al., 1999). The ability to experience life in ways that are worthwhile and fulfilling is at the heart of life satisfaction, which can also be seen as a character strength (Suldo and Huebner, 2004). Further investigation into this idea has shown that success in one's career, health, and interpersonal relationships are all significantly influenced by one's sense of fulfilment in life (Frisch, 1999). To ascertain whether there was a connection between the Light Triad and life satisfaction, Kaufman (2019) conducted research. They discovered that one of the many possible advantages of the Light Triad was increased life satisfaction. Importantly, even after accounting for the robust Light Triad correlates of the HEXACO dimension of Honesty-Humility and the Big Five personality trait of Agreeableness, this relationship remained statistically significant. By showing that people who had more Light Triad traits than Dark

Triad traits reported having higher life satisfaction than people who had more Dark Triad traits than Light Triad traits, Neumann and colleagues (2020) replicated and extended these findings.

Methodology

Study Aims

The aim of this study is to understand effect of light triad, and meaning in life on the level of life satisfaction among health care professionals, utilising the *Satisfaction With Life Scale (SWLS)*, *Light Triad Scale (LTS)*, and *Meaning in Life Questionnaire (MLQ)* as measures. The objective is to gain insight into the overall well-being and positive psychological aspects of health care workers, specifically focusing on their life satisfaction, personality traits related to Kantianism, Humanism, and Faith in Humanity, as well as their perceived sense of meaning in life. The study addressed the following research objectives:

- To determine the level of life satisfaction among postgraduate, M.Sc. Nursing, MPT, and PharmD students
- To analyse the effect of light triad on life satisfaction among healthcare professionals
- To analyse the effect of meaning in life, on life satisfaction among healthcare professionals

Research Design

A cross-sectional and comparative study was conducted to investigate the levels of life satisfaction, light triad personality traits, and meaning in life among healthcare workers. This research design involved the collection of data at a single point in time, enabling a comparison of these psychological aspects among different groups of healthcare workers. The study aimed to gather data through offline questionnaires administered to the participants. These questionnaires were personally distributed to ensure direct interaction with the participants. Demographic details such as name, age, gender, and type of college were also collected. Participants were assured of anonymity and the privacy of their responses, with the guarantee that their responses would remain confidential and solely be used for research purposes. The offline questionnaires were distributed and collected over a span of one month, from April 1st, 2022, to June 1st, 2022.

Sample

The current study was conducted in 2022, involving a total of 120 subjects, with 30 postgraduate medical students, 30 M.Sc. Nursing students, 30 MPT students, and 30 PharmD students. Convenient sampling technique was employed to gather the data. Structured pre-tested questionnaires were utilised to collect the necessary information for the study. Prior to analyses, participant data was screened for careless, incomplete, or abnormal responding. To be eligible for participation, individuals had to meet the following **inclusion criteria**:

- Enrolled in a postgraduate program
- Participants should be actively working or studying in healthcare-related fields (such as medical, nursing, physical therapy, or pharmacy).
- Working knowledge of English language
- Willingness to provide consent

Individuals were **excluded** from the study if they:

- Were going through any medical procedure
- Suffered from psychiatric or mental illnesses
- Are retired or on extended leave

Measures

Independent variables

Light Triad, measured using the Light Triad Scale (*LTS*), developed by Tsukayama, Yaden, Hyde, and Kaufman (2019). In certain aspects, they stand in opposition to the Dark Triad of personality and reflect three distinct trait dimensions (Jonason and Webster, 2010). A first assessment of a loving and helpful disposition towards others (also known as "everyday saints") is the 12-item Light Triad Scale (*LTS*). The scale is divided into 3 subscales: Faith in Humanity, Humanism, and Kantianism. Each subscale consists of 4 items rated on a 5-point scale, ranging from 1 (very strongly disagree) to 5 (very strongly agree).

Meaning in Life, measured using Meaning in Life Questionnaire (*MLQ*), was developed by Steger, Frazier, Oishi, and Kaler (2006). The Meaning in Life Questionnaire evaluates two aspects of meaning in life using ten items that are scored on a seven-point scale from "Absolutely True" to "Absolutely Untrue." The presence of meaning subscale gauges the degree to which respondents believe their lives have purpose. The Search for Meaning subscale assesses respondents' motivation and level of engagement in their pursuit of meaning or a deeper understanding of significance in their life. The *MLQ* has strong informant convergence, test-retest stability, stable factor structure, and reliability. Being present has a good relationship with happiness, inherent religiosity, extraversion, and agreeableness, while having a negative relationship with anxiety and depression. Negatively

associated with future time perspective, dogmatism, and wellbeing, search is favourably related to religious quest, ruminating, past-negative and present-fatalistic time perspectives, negative affect, sadness, and neuroticism. As would be predicted, presence correlates with self-assessed personal progress, as well as altruistic and spiritual behaviours measured through daily journals. The *MLQ* takes around 5 minutes to complete.

Dependent variables

Life Satisfaction, was measured using Satisfaction With Life Scale (*SWLS*), first created by researchers Diener, Emmons, Larsen, and Griffin (1985) and published in an article in the *Journal of Personality Assessment*. A 5-item scale (not a measure of either positive or negative effect) intended to measure one's overall cognitive judgments of life satisfaction. A 7-point scale, ranging from 7 strongly agree to 1 strongly disagree, is used by participants to indicate how much they agree or disagree with each of the five statements. The emotional or affective component and the judgement or cognitive component are thought of as the two main components that make up subjective well-being. The judgement component of the *SWLS* was intended to be measured. A number of validation studies by Diener, Emmons, Larsen, and Griffith (1985) demonstrate that the *SWLS* has a single factor, good internal consistency, is trustworthy, and is content relevant for a variety of populations. High correlations with other well-being measures, such as the Fordyce Scale and the Giunn Scale, were used to demonstrate convergent validity. Further evidence that the *SWLS* is likely to be accurate over affective states comes from its weak correlation (.09) with measures of affect intensity.

Procedure

Ethical permission was obtained from Geetanjali Medical College and Hospital. Upon obtaining written authorization from the respective college principals, this study aims to collect data from a cohort of 120 postgraduate students enrolled in private educational institutions. The selection of participants for inclusion in the study will adhere to pre-defined criteria, ensuring the integrity and relevance of the study population.

Upon securing informed consent from the participants, pertinent demographic information encompassing details such as names, ages, genders, and the type of college attended will be collected. Subsequently, participants will be administered the Light Triad Scale (*LTS*) and the Meaning in Life Questionnaire (*MLQ*), and Satisfaction With Life Scale (*SWLS*) accompanied by clear instructions guiding their completion. The Light Triad Scale gauges a compassionate and beneficent orientation toward others, as manifested through daily behavioural patterns. A higher score on the Light Triad Scale is indicative of enhanced life satisfaction. The Meaning in Life Questionnaire, designed to assess two fundamental dimensions of life's significance, namely the Presence of Meaning and the Search for Meaning, offers insights into respondents' perceptions of the meaningfulness and understanding within their lives. A higher score on the Meaning in Life Questionnaire corresponds to heightened life satisfaction.

Upon culmination of data collection, scores will be computed, subsequently in the construction of a comprehensive master chart. This chart will serve as the foundation for subsequent statistical analyses, thereby facilitating the generation of conclusive findings. The ensuing stages of analysis will involve the application of statistical tools such as the Chi-Square Test, T-Test, and ANOVA.

Statistical Analysis

Descriptives are expressed in means and standard deviations. Karl-Pearson correlation coefficient was used to explore the relationship between variables i.e. life satisfaction with meaning of life, and light triad. ANOVA was used for comparing two or more groups. For all statistical analyses, $p < 0.05$ was considered statistically significant. Data analysis was conducted using IBM SPSS Statistics version 27.0 (IBM Corp., Armonk, NY, USA), and MS Excel 2007.

Results

Table 1

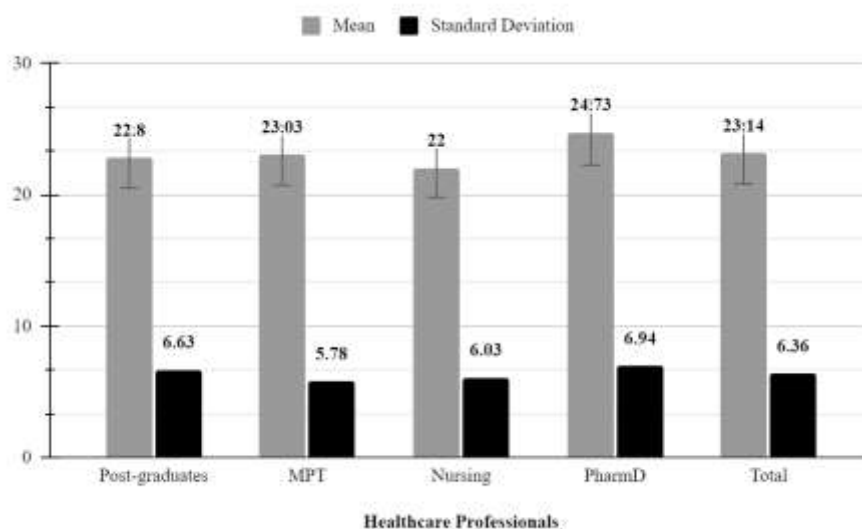
Descriptive Statistics: Life Satisfaction scores of Health care workers

	<i>N</i>	<i>M</i>	<i>SD</i>
Post-graduates	30	22.8	6.63
MPT	30	23.03	5.78
Nursing	30	22	6.03
PharmD	30	24.73	6.94
Total	120	23.14	6.36

Note. N = sample size, M = Mean, SD = Standard Deviation.

Figure 1

Descriptives of life satisfaction among healthcare professionals



Note. Mean stress levels and standard deviations are illustrated among healthcare professionals. The sample consisted of 120 participants. Error bars represent ± 1 standard deviation from the mean.

Table 2

One-Way Analysis of Variance (ANOVA): Comparing life satisfaction of healthcare professionals

Source	SS	df	MS	F	p
Between	26.025	3	8.67	0.23	0.87
Within	4355.7667	116	37.549		
Total	4381.7917	119			

Note. *df* = degrees of freedom, *SS* = Sum of Squares, *MS* = Mean Square, *F* = F-statistic. An analysis of variance (ANOVA) was conducted to compare the level of life satisfaction among healthcare professionals. The ANOVA revealed a non-significant effect, [$F(3, 116) = 0.23, p = 0.87$]. The groups being compared do not differ significantly from each other on the dependent variable (life satisfaction).

Table 3

Correlation scores for medical students with measures of meaning in life, light triad with life satisfaction

Variable	<i>M</i>	<i>SD</i>	Life satisfaction	Meaning in life	Light triad
Life satisfaction	23.142	6.362	--		
Meaning in life	50.625	10.040	0.5114**	--	
Light triad	43.167	10.04	0.5339**		--

Note. * $p < .05$. ** $p < .01$. A correlation analysis was conducted to examine the relationship between life satisfaction and meaning in life, and light triad, among medical students. The correlation coefficient (ρ) of life satisfaction, with meaning in life and light triad was found to be $r = 0.5114$ ($p = 0.00001$ **), and $r = 0.5339$ ($p = 0.00001$ **) indicating a statistically significant association. As medical students perceive their lives to have more meaning, they are also more likely to report higher levels of life satisfaction. Medical students who exhibit more of these positive personality traits are also more likely to report higher levels of life satisfaction.

Discussion

In an ever-evolving landscape of healthcare, the well-being of healthcare professionals stands as a critical concern. The present study aimed to explore the interplay between psychological constructs and life satisfaction among healthcare professionals. With a focus on the enigmatic trio of Kantianism, Humanism, and Faith in Humanity, collectively known as the light triad, and the profound notion of meaning in life, this study delves into the inner dimensions of individuals who dedicate their lives to the service of others. The overarching objective is to shed light on the factors that shape the well-being of these professionals, with a specific emphasis on their life satisfaction levels. As the healthcare industry continues to grapple with various challenges, understanding the underlying facts that contribute to the overall life satisfaction of postgraduate students pursuing degrees in Nursing, MPT, PharmD, and other related fields becomes paramount. The present study strives to provide invaluable insights that could potentially foster better support systems and strategies, ultimately fostering the holistic well-being of those who devote themselves to the care of others.

The obtained ANOVA results (Table 2) did not reveal a statistically significant effect in terms of life satisfaction across the distinct groups of healthcare professionals [$F(3, 116) = 0.23, p = 0.87$]. Thus, contrary to the initial hypothesis ($H3$), the comparison of these groups did not yield significant variations in life satisfaction levels.

This outcome suggests that, within the scope of this study, the specific category of healthcare professionals being investigated exhibited relatively consistent levels of life satisfaction. The non-significant finding may be attributed to various factors, such as the specific sample composition, measurement instruments employed, or unexamined variables. As a result, future research could consider broadening the participant pool, incorporating additional dimensions of measurement, or employing alternative analytical approaches to gain a more comprehensive understanding of the factors contributing to life satisfaction disparities within the realm of postgraduate healthcare education.

The findings of this study provide insights into the relationship between life satisfaction, meaning in life, and the light triad traits among healthcare professionals. The results revealed a robust and statistically significant positive correlation between life satisfaction and both meaning in life and the light triad traits. These findings support the hypotheses (*H1 and H2*) put forth in this study and align with existing literature. The substantial correlation coefficients (ρ) of 0.51 and 0.53 for meaning in life and the light triad traits, with life satisfaction ($p < .01$), suggest that as healthcare professionals perceive a higher sense of meaning in their lives, they are more likely to report elevated levels of life satisfaction. This aligns with existing research by Abu-Raiya et al. (2021); Joshanloo (2019); Russo-Netzer et al. (2021) and Frankl's (1950/1996). Importantly, even when using a sample with a sizable portion of English people, meaning in life was associated with life satisfaction beyond positive and negative affect (Nietzsche, 1889/1997). Additionally, the results suggest that meaning is not primarily motivated by the desire to feel good right away (Frankl, 1950/1996; Maslow, 1961) and that life satisfaction is not the same positive affect as an attitude (Diener et al., 2012). Moreover, a thesis work (Overton, 2022) also studied the positive influence of the light triad traits on life satisfaction. Life satisfaction emphasises the significance of Humanism, Kantianism, and Faith in Humanity as integral components of individuals' overall well-being. While the "dark triad" encourages creativity, it also increases the likelihood of cheating. As it turns out, there is a complementary makeup known as the "light triad" that might help to explain why some of us are naturally good. The kindness of ordinary saints doesn't just help the rest of the world. According to Kaufman's research, people who score highly on these characteristics reported feeling more content with their relationships and life in general, as well as having a higher sense of self-worth and self-confidence. High scores were also associated with a wide range of character traits, such as curiosity, perspective, zest, love, kindness, teamwork, forgiveness, and gratitude. (Oakes, 2019).

Overall, these findings highlight that those who feel their work has meaning and who embody qualities like kindness, Humanism, empathy, and Faith in Humanity tend to be happier with their lives. This suggests that finding purpose and being a positive person can make healthcare workers feel more satisfied. Now, let's think: Could focusing on these good qualities not only make healthcare workers happier but also improve the healthcare system as a whole? In a time where caring and feeling connected really matter, maybe helping healthcare providers nurture these positive qualities could lead to better overall well-being for everyone involved.

These results not only contribute to the research on the psychological dimensions of medical education but also provide actionable insights for educational institutions aiming to enhance training students' overall satisfaction and well-being. Future research could dig deeper into the mechanisms underlying these relationships and explore potential interventions that promote the cultivation of meaning in life and the light triad traits among healthcare students, fostering a more fulfilling educational experience.

Conclusion

The present study aimed to explore the effect of light triad, meaning in life on life satisfaction among healthcare professionals. While the ANOVA results did not reveal significant life satisfaction differences among distinct groups of healthcare professionals, rejecting the alternative hypothesis *H3*, the study's broader findings unveiled crucial correlations. A strong positive relationship emerged between life satisfaction, meaning in life, and the light triad traits, validating the study's hypotheses (*H1* and *H2*) and aligning the same with existing literature.

Limitations

- Limited generalizability: The study involved a relatively small sample size (120 participants). Therefore, the findings may not be representative of many healthcare professionals. Caution should be exercised when generalising the results to larger populations.
- Self-Report Measures: The study relies on self-report measures for collecting data on the Light Triad Scale, Meaning in Life Questionnaire, and Satisfaction With Life Scale. Self-report measures are subject to response bias, social desirability bias, and variations in interpretation. Participants may provide answers that they believe are expected rather than accurate reflections of their true feelings.
- Homogeneity of Sample: The study focuses on postgraduate students pursuing different healthcare disciplines. This homogeneity in terms of educational level and career stage may limit the variability of responses and potential outcomes. Including healthcare professionals with diverse experience levels and backgrounds could provide a more comprehensive understanding.

Future Research Directions

- **Longitudinal Studies:** Conducting longitudinal studies that follow healthcare professionals over an extended period can provide insights into how the relationships between the light triad traits, meaning in life, and life satisfaction evolve over time. This approach can help uncover patterns of change and stability and shed light on the causal nature of these relationships.
- **Comparative Studies:** Extend the research to include a broader range of healthcare specialties and professional experience levels. Comparing the perceptions and experiences of healthcare professionals working in different domains could provide a more comprehensive understanding of how these variables interact within diverse contexts.
- **Mixed-Methods Research:** Combine quantitative surveys with qualitative interviews or focus groups to gain a richer understanding of healthcare professionals' experiences. Qualitative methods can offer insights into the nuances of how light triad traits and meaning in life contribute to life satisfaction and overall well-being.
- **Workplace Interventions:** Developing and evaluating workplace interventions or policies that support the development of light triad traits and a sense of meaning in life among healthcare professionals. This could involve fostering a culture of empathy, compassion, and purpose within healthcare settings.
- **Technology and Well-being:** Explore the role of technology in shaping healthcare professionals' well-being and life satisfaction. Investigate how technology use, such as telemedicine or electronic health records, impacts their perceptions of the light triad traits, meaning in life, and overall satisfaction with healthcare professionals careers.

References

1. Abu-Raiya, H., Sasson, T., and Russo-Netzer, P. (2020). Presence of meaning, search for meaning, religiousness, satisfaction with life and depressive symptoms among a diverse Israeli sample. *International Journal of Psychology*. <https://doi.org/10.1002/ijop.12709>
2. Ackerman, C. (2018, February 6). *What is the Meaning of Life According to Positive Psychology [2019]*. PositivePsychology.com.
3. Al-Ghunaim, T. A., Johnson, J., Biyani, C. S., Alshahrani, K. M., Dunning, A., and O'Connor, D. B. (2021). Surgeon burnout, impact on patient safety and professionalism: A systematic review and meta-analysis. *American Journal of Surgery*, S0002-9610(21)007595. <https://doi.org/10.1016/j.amjsurg.2021.12.027>

4. Amaike, B. (2014). Education as a correlate of life satisfaction among formal sector retirees in Lagos State, Nigeria. *African Population Studies*, 27(2), 434. <https://doi.org/10.11564/27-2-487>
5. Amerio, A., Bianchi, D., Santi, F., Costantini, L., Odone, A., Signorelli, C., Costanza, A., Serafini, G., Amore, M., and Aguglia, A. (2020). Covid-19 pandemic impact on mental health: a web-based cross-sectional survey on a sample of Italian general practitioners. *Acta Biomedica Atenei Parmensis*, 91(2), 83–88. <https://doi.org/10.23750/abm.v91i2.9619>
6. An, Y., Yang, Y., Wang, A., Li, Y., Zhang, Q., Cheung, T., Ungvari, G. S., Qin, M.-Z., An, F.-R., and Xiang, Y.-T. (2020). Prevalence of depression and its impact on quality of life among frontline nurses in emergency departments during the COVID-19 outbreak. *Journal of Affective Disorders*, 276(276), 312–315. <https://doi.org/10.1016/j.jad.2020.06.047>
7. Babore, A., Lombardi, L., Viceconti, M. L., Pignataro, S., Marino, V., Crudele, M., Candelori, C., Bramanti, S. M., and Trumello, C. (2020). Psychological effects of the COVID-2019 pandemic: Perceived stress and coping strategies among healthcare professionals. *Psychiatry Research*, 293, 113366. <https://doi.org/10.1016/j.psychres.2020.113366>
8. Balch, C. M., Shanafelt, T. D., Sloan, J. A., Satele, D. V., and Freischlag, J. A. (2011). Distress and Career Satisfaction Among 14 Surgical Specialties, Comparing Academic and Private Practice Settings. *Annals of Surgery*, 254(4), 558–568. <https://doi.org/10.1097/sla.0b013e318230097e>
9. Battista, J., and Almond, R. (1973). The Development of Meaning in Life. *Psychiatry*, 36(4), 409–427. <https://doi.org/10.1080/00332747.1973.11023774>
10. Baughman, H. M., Dearing, S., Giammarco, E., and Vernon, P. A. (2012). Relationships between bullying behaviours and the Dark Triad: A study with adults. *Personality and Individual Differences*, 52(5), 571–575. <https://doi.org/10.1016/j.paid.2011.11.020>
11. Baumeister, R. F. (1991). *Meanings of life*. Guilford Press.
12. Baumeister, R. F., and Vohs, K. D. (2002). The pursuit of meaningfulness in life. In C. R. Snyder and S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 608–618). New York: Oxford University Press.

13. Behzadfar, F., Arabkhazaeli, N., Khani, H., Zamani, N., and Zamani, S. (2018). Relationship between Perceived Social Support and Self-esteem with Satisfaction of Life in Iranian Students. *Health Research Journal*, 3(1), 45–52. <https://doi.org/10.29252/hrjbaq.3.1.45>
14. Ben-Zur, H. (2003). Happy Adolescents: The Link Between Subjective Well-Being, Internal Resources, and Parental Factors. *Journal of Youth and Adolescence*, 32(2), 67–79. <https://doi.org/10.1023/a:1021864432505>
15. Benson, M. A., Peterson, T., Salazar, L., Morris, W., Hall, R., Howlett, B., and Phelps, P. (2016). Burnout in Rural Physician Assistants. *The Journal of Physician Assistant Education*, 27(2), 81–83. <https://doi.org/10.1097/jpa.0000000000000069>
16. Bering, J. M. (2003). Towards a cognitive theory of existential meaning. *New Ideas in Psychology*, 21(2), 101–120. [https://doi.org/10.1016/s0732-118x\(03\)00014-x](https://doi.org/10.1016/s0732-118x(03)00014-x)
17. Bodenheimer, T., and Sinsky, C. (2014). From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider. *The Annals of Family Medicine*, 12(6), 573–576. <https://doi.org/10.1370/afm.1713>
18. Bonanno, G. A., Papa, A., Lalande, K., Zhang, N., and Noll, J. G. (2005). Grief Processing and Deliberate Grief Avoidance: A Prospective Comparison of Bereaved Spouses and Parents in the United States and the People’s Republic of China. *Journal of Consulting and Clinical Psychology*, 73(1), 86–98. <https://doi.org/10.1037/0022-006x.73.1.86>
19. Bonebright, C. A., Clay, D. L., and Ankenmann, R. D. (2000). The relationship of workaholism with work–life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology*, 47(4), 469–477. <https://doi.org/10.1037/0022-0167.47.4.469>
20. Braithwaite, J., Herkes, J., Ludlow, K., Testa, L., and Lamprell, G. (2017). Association between organisational and workplace cultures, and patient outcomes: Systematic review. *BMJ Open*, 7(11). <https://doi.org/10.1136/bmjopen-2017-017708>
21. Bryant-Geneviev, J. (2021). Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic — United States, March–April 2021. *MMWR. Morbidity and Mortality Weekly Report*, 70. <https://doi.org/10.15585/mmwr.mm7026e1>

22. Buckels, E. E., Jones, D. N., and Paulhus, D. L. (2013). Behavioral Confirmation of Everyday Sadism. *Psychological Science*, 24(11), 2201–2209. <https://doi.org/10.1177/0956797613490749>
23. Buckels, E. E., Trapnell, P. D., and Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, 67, 97–102. <https://doi.org/10.1016/j.paid.2014.01.016>
24. Bulut, T. (2017). The concept of sadism in the current empirical literature. *Zbornik Instituta Za Kriminoloska I Socioloska Istrazivanja*, 36(1), 23–41.
25. Cai, H., Tu, B., Ma, J., Chen, L., Fu, L., Jiang, Y., and Zhuang, Q. (2020). Psychological impacts and coping strategies of front-line medical staff during COVID-19 outbreak in Hunan, China. *Medical Science Monitor*, 26. <https://doi.org/10.12659/msm.924171>
26. Caruso, R., Annaloro, C., Arrigoni, C., Ghizzardi, G., Dellafiore, F., Magon, A., Maga, G., Nania, T., Pittella, F., and Villa, G. (2021). Burnout and post-traumatic stress disorder in frontline nurses during the COVID-19 pandemic: a systematic literature review and meta-analysis of studies published in 2020. *Acta Bio-Medica: Atenei Parmensis*, 92(S2), e2021428. <https://doi.org/10.23750/abm.v92iS2.11796>
27. Carver, C. S., and Scheier, M. F. (2005). Optimism. In C. R. Snyder and S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 231–243). New York: Oxford University Press.
28. Çelmeçe, N., and Menekay, M. (2020). The Effect of Stress, Anxiety and Burnout Levels of Healthcare Professionals Caring for COVID-19 Patients on Their Quality of Life. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.597624>
29. Chabrol, H., Van Leeuwen, N., Rodgers, R., and Séjourné, N. (2009). Contributions of psychopathic, narcissistic, Machiavellian, and sadistic personality traits to juvenile delinquency. *Personality and Individual Differences*, 47(7), 734–739. <https://doi.org/10.1016/j.paid.2009.06.020>
30. Chan, D. W. (2009). Orientations to happiness and subjective well-being among Chinese prospective and in-service teachers in Hong Kong. *Educational Psychology*, 29(2), 139–151. <https://doi.org/10.1080/01443410802570907>
31. Chang, E. M. L., Bidewell, J. W., Huntington, A. D., Daly, J., Johnson, A., Wilson, H., Lambert, V. A., and Lambert, C. E. (2007). A survey of role stress, coping and health in Australian and New Zealand hospital

- nurses. *International Journal of Nursing Studies*, 44(8), 1354–1362.
<https://doi.org/10.1016/j.ijnurstu.2006.06.003>
32. Chirico, F., Ferrari, G., and Nucera, G. (2021). Prevalence of anxiety, depression, burnout syndrome, and mental health disorders among healthcare workers during the COVID-19 pandemic: A rapid umbrella review of systematic reviews SYSTEMATIC REVIEW IN OCCUPATIONAL HEALTH PSYCHOLOGY AND COVID-19. *The Italian Journal for Interdisciplinary Health and Social Development*, 6, 209–220.
<https://doi.org/10.19204/2021/prvl7>
33. Chirico, F., and Nucera, G. (2020). Tribute to healthcare operators threatened by the COVID-19 pandemic. *The Italian Journal for Interdisciplinary Health and Social Development*, 5, 165–168.
<https://doi.org/10.19204/2020/trbt1>
34. Chiu, M.-C., Wang, M.-J. J., Lu, C.-W., Pan, S.-M., Kumashiro, M., and Ilmarinen, J. (2007). Evaluating work ability and quality of life for clinical nurses in Taiwan. *Nursing Outlook*, 55(6), 318–326.
<https://doi.org/10.1016/j.outlook.2007.07.002>
35. Compton, W. C., Smith, M. L., Cornish, K. A., and Qualls, D. L. (1996). Factor structure of mental health measures. *Journal of Personality and Social Psychology*, 71(2), 406–413. <https://doi.org/10.1037/0022-3514.71.2.406>
36. Czekierda, K., Banik, A., Park, C. L., and Luszczynska, A. (2017). Meaning in life and physical health: systematic review and meta-analysis. *Health Psychology Review*, 11(4), 387–418.
<https://doi.org/10.1080/17437199.2017.1327325>
37. De Neve, J., and Ward, G. W. (2017). Happiness at Work. *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.2943318>
38. De Silva, A. P., Liyanage, I. K., De Silva, S. T. G., Jayawardana, M. B., Liyanage, C. K., and Karunathilake, I. M. (2013). Migration of Sri Lankan medical specialists. *Human Resources for Health*, 11(1).
<https://doi.org/10.1186/1478-4491-11-21>
39. Delmas, P., and Duquette, A. (2000). [Hardiness, coping and quality of life of nurses working in intensive care units]. *Recherche En Soins Infirmiers*, 60, 17–26. <https://pubmed.ncbi.nlm.nih.gov/10897740>

40. Densen, P. (2011). Challenges and opportunities facing medical education. *Transactions of the American Clinical and Climatological Association*, 122, 48–58. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3116346/>
41. Dezutter, J., Casalin, S., Wachholtz, A., Luyckx, K., Hekking, J., and Vandewiele, W. (2013). Meaning in life: An important factor for the psychological well-being of chronically ill patients? *Rehabilitation Psychology*, 58(4), 334–341. <https://doi.org/10.1037/a0034393>
42. Diener, E., Emmons, R. A., Larsen, R. J., and Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13
43. Diener, E., Fujita, F., Tay, L., and Biswas-Diener, R. (2011). Purpose, Mood, and Pleasure in Predicting Satisfaction Judgments. *Social Indicators Research*, 105(3), 333–341. <https://doi.org/10.1007/s11205-011-9787-8>
44. Diener, E., Suh, E. M., Lucas, R. E., and Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276–302. <https://doi.org/10.1037/0033-2909.125.2.276>
45. Disabato, D. J., Kashdan, T. B., Short, J. L., and Jarden, A. (2016). What Predicts Positive Life Events that Influence the Course of Depression? A Longitudinal Examination of Gratitude and Meaning in Life. *Cognitive Therapy and Research*, 41(3), 444–458. <https://doi.org/10.1007/s10608-016-9785-x>
46. Dogan, A., Deniz, M., Odabaş, H., Özyeşil, Z., and Özgirgin, N. (2012). Rehabilitasyon Merkezinde Çalışan Sağlık Personelinde İş ve Yaşam Doyumu. *Türkiye Fiziksel Tıp ve Rehabilitasyon Dergisi*, 58(1), 16–21. <https://doi.org/10.4274/tftr.24085>
47. Domagała, A., Bała, M., Storman, D., Peña-Sánchez, J., Świerz, M., Kaczmarczyk, M., and Storman, M. (2018). Factors Associated with Satisfaction of Hospital Physicians: A Systematic Review on European Data. *International Journal of Environmental Research and Public Health*, 15(11), 2546. <https://doi.org/10.3390/ijerph15112546>
48. Dyrbye, L. N., Massie, F. S., Eacker, A., Harper, W., Power, D., Durning, S. J., Thomas, M. R., Moutier, C., Satele, D., Sloan, J., and Shanafelt, T. D. (2010). Relationship Between Burnout and Professional Conduct and Attitudes Among US Medical Students. *JAMA*, 304(11), 1173. <https://doi.org/10.1001/jama.2010.1318>

49. Dyrbye, L. N., West, C. P., Sinsky, C. A., Trockel, M., Tutty, M., Satele, D., Carlasare, L., and Shanafelt, T. (2022). Physicians' Experiences With Mistreatment and Discrimination by Patients, Families, and Visitors and Association With Burnout. *JAMA Network Open*, 5(5), e2213080. <https://doi.org/10.1001/jamanetworkopen.2022.13080>
50. Edwards, M. J., and Holden, R. R. (2001). Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology*, 57(12), 1517–1534. <https://doi.org/10.1002/jclp.1114>
51. Fahrenkopf, A. M., Sectish, T. C., Barger, L. K., Sharek, P. J., Lewin, D., Chiang, V. W., Edwards, S., Wiedermann, B. L., and Landrigan, C. P. (2008). Rates of medication errors among depressed and burnt out residents: prospective cohort study. *BMJ*, 336(7642), 488–491. <https://doi.org/10.1136/bmj.39469.763218.be>
52. Ford, S., Lewis, S., and Fallowfield, L. (1995). Psychological morbidity in newly referred patients with cancer. *Journal of Psychosomatic Research*, 39(2), 193–202. [https://doi.org/10.1016/0022-3999\(94\)00103-c](https://doi.org/10.1016/0022-3999(94)00103-c)
53. Frank, E. (2000). Correlates of Physicians' Prevention-Related Practices: Findings From the Women Physicians' Health Study. *Archives of Family Medicine*, 9(4), 359–367. <https://doi.org/10.1001/archfami.9.4.359>
54. Frankl, V. E. (1965). *The Doctor and the Soul*.
55. Frankl, V. E. (1992). *Man's search for meaning*. Beacon Press.
56. Frankl, V. E. (1996) (2nd ed.). Homo patiens. *Der leidende Mensch [Suffering humanity]* (pp. 161–242). Bern, Switzerland: Huber. (Original work published in 1950)
57. Frisch, M. B. (1999). Quality of life assessment/intervention and the Quality of Life Inventory (QOLI). In M. R. Maruish (Ed.), *The use of psychological testing for treatment planning and outcome assessment* (2, 1227–1331). Hillsdale, NJ: Lawrence Erlbaum.
58. Fry, P. S. (2001). The Unique Contribution of Key Existential Factors to the Prediction of Psychological Well-Being of Older Adults Following Spousal Loss. *The Gerontologist*, 41(1), 69–81. <https://doi.org/10.1093/geront/41.1.69>
59. Gable, S., and Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9(2), 103–110. <https://doi.org/10.1037/1089-2680.9.2.103>

60. Gallagher, M., Muldoon, O. T., and Pettigrew, J. (2015). An Integrative Review of Social and Occupational Factors Influencing Health and Wellbeing. *Frontiers in Psychology*, 6(1281). <https://doi.org/10.3389/fpsyg.2015.01281>
61. Gaszynska, E., Stankiewicz-Rudnicki, M., Szatko, F., Wieczorek, A., and Gaszynski, T. (2014). Life Satisfaction and Work-Related Satisfaction among Anesthesiologists in Poland. *The Scientific World Journal*, 2014, 1–9. <https://doi.org/10.1155/2014/601865>
62. Gorini, A., Fiabane, E., Sommaruga, M., Barbieri, S., Sottotetti, F., La Rovere, M. T., Tremoli, E., and Gabanelli, P. (2020). Mental health and risk perception among Italian healthcare workers during the second month of the Covid-19 pandemic. *Archives of Psychiatric Nursing*, 34(6). <https://doi.org/10.1016/j.apnu.2020.10.007>
63. Greitemeyer, T. (2015). Everyday sadism predicts violent video game preferences. *Personality and Individual Differences*, 75, 19–23. <https://doi.org/10.1016/j.paid.2014.10.049>
64. Halama, P., and Dědová, M. (2007). Meaning In Life And Hope As Predictors Of Positive Mental Health: Do They Explain Residual Variance Not Predicted By Personality Traits? *Studia Psychologica*, 49(3), 191–200.
65. Hamaideh, S. H., Mrayyan, M. T., Mudallal, R., Faouri, I. G., and Khasawneh, N. A. (2008). Jordanian nurses' job stressors and social support. *International Nursing Review*, 55(1), 40–47. <https://doi.org/10.1111/j.1466-7657.2007.00605.x>
66. Harikandei, H. R. (2017). Relationship between Perceived Social Support, Mental Health and Life Satisfaction in MSc Students of Physical Education. *International Journal of Sports Science*, 7(4), 159–162. <http://article.sapub.org/10.5923.j.sports.20170704.01.html>
67. Haugan, G., and Dezutter, J. (2021). Meaning-in-Life: A Vital Salutogenic Resource for Health. *Health Promotion in Health Care – Vital Theories and Research*, 85–101. https://doi.org/10.1007/978-3-030-63135-2_8
68. Health. (2011, August 31). *NHS Staff Management and Health Service Quality*. GOV.UK. <https://www.gov.uk/government/publications/nhs-staff-management-and-health-service-quality>

69. Health, W. H. O. D. of M. (1996). WHOQOL-BREF : introduction, administration, scoring and generic version of the assessment : field trial version, December 1996. *Apps.who.int*. <https://apps.who.int/iris/handle/10665/63529>
70. Heath, C., Sommerfield, A., and von Ungern-Sternberg, B. S. (2020). Resilience strategies to manage psychological distress amongst healthcare workers during the COVID-19 pandemic: a narrative review. *Anaesthesia*, 75(10), 1364–1371. <https://doi.org/10.1111/anae.15180>
71. Hegney, D., Plank, A., and Parker, V. (2003). Nursing workloads: the results of a study of Queensland Nurses. *Journal of Nursing Management*, 11(5), 307–314. <https://doi.org/10.1046/j.1365-2834.2003.00376.x>
72. Heintzelman, S. J., and King, L. A. (2014). Life is pretty meaningful. *American Psychologist*, 69(6), 561–574. <https://doi.org/10.1037/a0035049>
73. Hill, P. L., Burrow, A. L., Brandenberger, J. W., Lapsley, D. K., and Quaranto, J. C. (2010). Collegiate purpose orientations and well-being in early and middle adulthood. *Journal of Applied Developmental Psychology*, 31(2), 173–179. <https://doi.org/10.1016/j.appdev.2009.12.001>
74. Himmelstein, K. E. W., and Venkataramani, A. S. (2019). Economic Vulnerability Among US Female Health Care Workers: Potential Impact of a \$15-per-Hour Minimum Wage. *American Journal of Public Health*, 109(2), 198–205. <https://doi.org/10.2105/ajph.2018.304801>
75. Ho, M. Y., Cheung, F. M., and Cheung, S. F. (2010). The role of meaning in life and optimism in promoting well-being. *Personality and Individual Differences*, 48(5), 658–663. <https://doi.org/10.1016/j.paid.2010.01.008>
76. Hoedl, M., Bauer, S., and Eglseer, D. (2021). Influence of nursing staff working hours on stress levels during the COVID-19 pandemic. *HeilberufeScience*. <https://doi.org/10.1007/s16024-021-00354-y>
77. Holahan, C. K., Holahan, C. J., and Suzuki, R. (2008). Purposiveness, physical activity, and perceived health in cardiac patients. *Disability and Rehabilitation*, 30(23), 1772–1778. <https://doi.org/10.1080/10428190701661508>
78. Hosseini, M., Soltanian, M., Torabizadeh, C., and Shirazi, Z. H. (2022). Prevalence of burnout and related factors in nursing faculty members: a systematic review. *Journal of Educational Evaluation for Health Professions*, 19, 16. <https://doi.org/10.3352/jeehp.2022.19.16>

79. Hou, T., Zhang, T., Cai, W., Song, X., Chen, A., Deng, G., and Ni, C. (2020). Social support and mental health among health care workers during Coronavirus Disease 2019 outbreak: A moderated mediation model. *PLOS ONE*, *15*(5), e0233831. <https://doi.org/10.1371/journal.pone.0233831>
80. Huang, J. Z., Han, M. F., Luo, T. D., Ren, A. K., and Zhou, X. P. (2020). [Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19]. *Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi = Zhonghua Laodong Weisheng Zhiyebing Zazhi = Chinese Journal of Industrial Hygiene and Occupational Diseases*, *38*(0), E001. <https://doi.org/10.3760/cma.j.cn121094-20200219-00063>
81. IsHak, W., Nikraves, R., Lederer, S., Perry, R., Ogunyemi, D., and Bernstein, C. (2013). Burnout in medical students: a systematic review. *The Clinical Teacher*, *10*(4), 242–245. <https://doi.org/10.1111/tct.12014>
82. Jonason, P. K., Li, N. P., and Buss, D. M. (2010). The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics. *Personality and Individual Differences*, *48*(4), 373–378. <https://doi.org/10.1016/j.paid.2009.11.003>
83. Jonason, P. K., Slomski, S., and Partyka, J. (2012). The Dark Triad at work: How toxic employees get their way. *Personality and Individual Differences*, *52*(3), 449–453. <https://doi.org/10.1016/j.paid.2011.11.008>
84. Jonason, P. K., and Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, *22*(2), 420–432. <https://doi.org/10.1037/a0019265>
85. Jones, D. N., and Figueredo, A. J. (2013). The Core of Darkness: Uncovering the Heart of the Dark Triad. *European Journal of Personality*, *27*(6), 521–531. <https://doi.org/10.1002/per.1893>
86. Jonsson, A., and Halabi, J. (2006). Work related post-traumatic stress as described by Jordanian emergency nurses. *Accident and Emergency Nursing*, *14*(2), 89–96. <https://doi.org/10.1016/j.aen.2006.02.001>
87. Joshanloo, M. (2019). Investigating the relationships between subjective well-being and psychological well-being over two decades. *Emotion*, *19*(1). <https://doi.org/10.1037/emo0000414>
88. Kadadi, S. (2020). A STUDY ON MEDICAL PRACTITIONERS' LIFE SATISFACTION. *International Journal of Creative Research Thoughts*, *8*, 2320–2882. <https://ijcrt.org/papers/IJCRT2012304.pdf>
89. Kaufman, S. B. (2019, March 19). *The Light Triad vs. Dark Triad of Personality*. Scientific American Blog Network. <https://blogs.scientificamerican.com/beautiful-minds/the-light-triad-vs-dark-triad-of-personality/>

90. Kaufman, S. B., Yaden, D. B., Hyde, E., and Tsukayama, E. (2019). The Light vs. Dark Triad of Personality: Contrasting Two Very Different Profiles of Human Nature. *Frontiers in Psychology*, 10(467). <https://doi.org/10.3389/fpsyg.2019.00467>
91. Khatatbeh, H., Pakai, A., Al-Dwaikat, T., Onchonga, D., Amer, F., Prémusz, V., and Oláh, A. (2021). Nurses' burnout and quality of life: A systematic review and critical analysis of measures used. *Nursing Open*, 9(3). <https://doi.org/10.1002/nop2.936>
92. King, L. A., Hicks, J. A., Krull, J. L., and Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90(1), 179–196. <https://doi.org/10.1037/0022-3514.90.1.179>
93. Kinnier, R. T., Metha, A., Keim, J., and Okey, J. L. (1994). Depression, meaninglessness, and substance abuse in “normal” and hospitalized adolescents.. *Journal of Alcohol and Drug Education*.
94. Kircaburun, K., Jonason, P. K., and Griffiths, M. D. (2018). The Dark Tetrad traits and problematic social media use: The mediating role of cyberbullying and cyberstalking. *Personality and Individual Differences*, 135, 264–269. <https://doi.org/10.1016/j.paid.2018.07.034>
95. Klefтарas, G., and Psarra, E. (2012). Meaning in Life, Psychological Well-Being and Depressive Symptomatology: A Comparative Study. *Psychology*, 03(04), 337–345. <https://doi.org/10.4236/psych.2012.34048>
96. Lal, A., Tharyan, A., and Tharyan, P. (2020). The prevalence, determinants and the role of empathy and religious or spiritual beliefs on job stress, job satisfaction, coping, burnout, and mental health in medical and surgical faculty of a teaching hospital: A cross-sectional survey. *La Revue de Médecine Interne*, 41(4), 232–240. <https://doi.org/10.1016/j.revmed.2019.12.005>
97. Lancee, W. J., Maunder, R., and Goldbloom, D. S. (2008). Prevalence of Psychiatric Disorders Among Toronto Hospital Workers One to Two Years After the SARS Outbreak. *Psychiatric Services*, 59(1), 91–95. <https://doi.org/10.1176/appi.ps.59.1.91>
98. Lázaro-Pérez, C., Martínez-López, J. Á., Gómez-Galán, J., and López-Meneses, E. (2020). Anxiety About the Risk of Death of Their Patients in Health Professionals in Spain: Analysis at the Peak of the COVID-19

- Pandemic. *International Journal of Environmental Research and Public Health*, 17(16), 5938.
<https://doi.org/10.3390/ijerph17165938>
99. Leyton, E. (2011). *Hunting Humans*. McClelland and Stewart.
100. Liang, Y., Wang, H., and Tao, X. (2015). Quality of life of young clinical doctors in public hospitals in China's developed cities as measured by the Nottingham Health Profile (NHP). *International Journal for Equity in Health*, 14(1). <https://doi.org/10.1186/s12939-015-0199-2>
101. Lockley, S. W., Cronin, J. W., Evans, E. E., Cade, B. E., Lee, C. J., Landrigan, C. P., Rothschild, J. M., Katz, J. T., Lilly, C. M., Stone, P. H., Aeschbach, D., Czeisler, C. A., and Harvard Work Hours, Health and Safety Group. (2004). Effect of reducing interns' weekly work hours on sleep and attentional failures. *The New England Journal of Medicine*, 351(18), 1829–1837. <https://doi.org/10.1056/NEJMoa041404>
102. Long, J., Burgess-Limerick, R., and Stapleton, F. (2013). What do clinical optometrists like about their job? *Clinical and Experimental Optometry*, 96(5), 460–466. <https://doi.org/10.1111/cxo.12017>
103. Luoma, J. B., Martin, C. E., and Pearson, J. L. (2002). Contact With Mental Health and Primary Care Providers Before Suicide: A Review of the Evidence. *American Journal of Psychiatry*, 159(6), 909–916. <https://doi.org/10.1176/appi.ajp.159.6.909>
104. Magnavita, N., Chirico, F., Garbarino, S., Bragazzi, N. L., Santacroce, E., and Zaffina, S. (2021). SARS/MERS/SARS-CoV-2 Outbreaks and Burnout Syndrome among Healthcare Workers. An Umbrella Systematic Review. *International Journal of Environmental Research and Public Health*, 18(8), 4361. <https://doi.org/10.3390/ijerph18084361>
105. Mahmood, J. I., Grotmol, K. S., Tesli, M., Moum, T., Andreassen, O., and Tyssen, R. (2019). Life satisfaction in Norwegian medical doctors: a 15-year longitudinal study of work-related predictors. *BMC Health Services Research*, 19(1). <https://doi.org/10.1186/s12913-019-4599-7>
106. Malik, O. F., Shahzad, A., Waheed, A., and Yousaf, Z. (2020). Abusive supervision as a trigger of malevolent creativity: do the Light Triad traits matter? *Leadership and Organization Development Journal*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/lodj-09-2019-0386>
107. Manh Than, H., Minh Nong, V., Trung Nguyen, C., Phu Dong, K., Ngo, H. T., Thu Doan, T., Thu Do, N., Huyen Thi Nguyen, T., Van Do, T., Xuan Dao, C., Quang Nguyen, T., Ngoc Pham, T., and Duy Do, C. (2020).

- Mental Health and Health-Related Quality-of-Life Outcomes Among Frontline Health Workers During the Peak of COVID-19 Outbreak in Vietnam: A Cross-Sectional Study. *Risk Management and Healthcare Policy*, Volume 13, 2927–2936. <https://doi.org/10.2147/rmhps.s280749>
108. Mann, J. J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., Haas, A., Hegerl, U., Lonnqvist, J., Malone, K., Marusic, A., Mehlum, L., Patton, G., Phillips, M., Rutz, W., Rihmer, Z., Schmidtke, A., Shaffer, D., Silverman, M., Takahashi, Y., and Varnik, A. (2005). Suicide Prevention Strategies. *JAMA*, 294(16), 2064. <https://doi.org/10.1001/jama.294.16.2064>
109. Marcus, D. K., Preszler, J., and Zeigler-Hill, V. (2018). A network of dark personality traits: What lies at the heart of darkness? *Journal of Research in Personality*, 73, 56–62. <https://doi.org/10.1016/j.jrp.2017.11.003>
110. Martela, F., and Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, 11(5), 531–545. <https://doi.org/10.1080/17439760.2015.1137623>
111. Martínez-López, J. Á., Lázaro-Pérez, C., Gómez-Galán, J., and Fernández-Martínez, M. del M. (2020). Psychological Impact of COVID-19 Emergency on Health Professionals: Burnout Incidence at the Most Critical Period in Spain. *Journal of Clinical Medicine*, 9(9), 3029. <https://doi.org/10.3390/jcm9093029>
112. Maslow, A. H. (1961). Peak experiences as acute identity experiences. *The American Journal of Psychoanalysis*, 21(2), 254–262. <https://doi.org/10.1007/bf01873126>
113. Međedović, J., and Bulut, T. (2017). Expanding the Nomological Network of Dark Tetrad: The Case of Cynicism, Aggressive Humor and Attitudes Towards Immigrants. *Zbornik Instituta Za Kriminološka I Sociološka Istraživanja*, 36(3), 7–19. <http://institutecsr.iksi.ac.rs/228/>
114. Međedović, J., and Kovačević, U. (2021). Sadism as a Key Dark Trait in the Link Between Football Fandom and Criminal Attitudes. *Journal of Individual Differences*, 42(1), 9–18. <https://doi.org/10.1027/1614-0001/a000325>
115. Međedović, J., and Petrović, B. (2015). The Dark Tetrad. *Journal of Individual Differences*, 36(4), 228–236. <https://doi.org/10.1027/1614-0001/a000179>

116. Medeiros, K. S. de, Ferreira de Paiva, L. M., Macêdo, L. T. de A., Farias de Souza, W., Soares da Silva, L. A., Sarmiento, A. C. A., Costa, A. P. F., Freitas, C. L., and Gonçalves, A. K. (2021). Prevalence of Burnout Syndrome and other psychiatric disorders among health professionals during the COVID-19 pandemic: A systematic review and meta-analysis protocol. *PLOS ONE*, *16*(12), e0260410. <https://doi.org/10.1371/journal.pone.0260410>
117. Medscape. (2019). *Medscape Physician Lifestyle and Happiness Report*. Medscape.com. <https://www.medscape.com/slideshow/2019-lifestyle-happiness-6011057#3>
118. Melo-Oliveira, M. E., Sá-Caputo, D., Bachur, J. A., Paineiras-Domingos, L. L., Sonza, A., Lacerda, A. C., Mendonça, V., Seixas, A., Taiar, R., and Bernardo-Filho, M. (2020). Reported quality of life in countries with cases of COVID19: a systematic review. *Expert Review of Respiratory Medicine*, 1–8. <https://doi.org/10.1080/17476348.2021.1826315>
119. Melton, A. M. A., and Schulenberg, S. E. (2008). On the measurement of meaning: Logotherapy's empirical contributions to humanistic psychology. *The Humanistic Psychologist*, *36*(1), 31–44. <https://doi.org/10.1080/08873260701828870>
120. Mikkola, L., Suutala, E., and Parviainen, H. (2018). Social support in the workplace for physicians in specialization training. *Medical Education Online*, *23*(1), 1435114. <https://doi.org/10.1080/10872981.2018.1435114>
121. Miller, A. (1991). Personality types: a modern synthesis. *Choice Reviews Online*, *29*(05), 29–301129–3011. <https://doi.org/10.5860/choice.29-3011>
122. Mirfarhadi, N., Moosavi, S., and Tabari, R. (2013). Life satisfaction and its determinants: a survey on Iranian nurses population. *Journal of Paramedical Sciences*, *4*(4). <https://doi.org/10.22037/jps.v4i4.4761>
123. Morgan, J., and Farsides, T. (2007). Measuring Meaning in Life. *Journal of Happiness Studies*, *10*(2), 197–214. <https://doi.org/10.1007/s10902-007-9075-0>
124. Moshagen, M., Hilbig, B. E., and Zettler, I. (2018). The dark core of personality. *Psychological Review*, *125*(5), 656–688. <https://doi.org/10.1037/rev0000111>
125. Muris, P., Merckelbach, H., Otgaar, H., and Meijer, E. (2017). The Malevolent Side of Human Nature: A Meta-Analysis and Critical Review of the Literature on the Dark Triad (Narcissism, Machiavellianism, and

- Psychopathy). *Perspectives on Psychological Science*, 12(2), 183–204.
<https://doi.org/10.1177/1745691616666070>
126. Murthy, V. H. (2022). Confronting health worker burnout and well-being. *New England Journal of Medicine*, 387(7). <https://doi.org/10.1056/nejmp2207252>
127. National Academies of Sciences, E., Division, H. and M., Health, B. on G., Education, G. F. on I. in H. P., Forstag, E. H., and Cuff, P. A. (2018). The Importance of Well-Being in the Health Care Workforce. In www.ncbi.nlm.nih.gov. National Academies Press (US). <https://www.ncbi.nlm.nih.gov/books/NBK540859/#>
128. Naushad, V. A., Bierens, J. J., Nishan, K. P., Firjeeth, C. P., Mohammad, O. H., Maliyakkal, A. M., ChaliHadan, S., and Schreiber, M. D. (2019). A Systematic Review of the Impact of Disaster on the Mental Health of Medical Responders. *Prehospital and Disaster Medicine*, 34(6), 632–643.
<https://doi.org/10.1017/s1049023x19004874>
129. Neumann, C. S., Kaufman, S. B., ten Brinke, L., Yaden, D. B., Hyde, E., and Tsykayama, E. (2020). Light and dark trait subtypes of human personality – A multi-study person-centered approach. *Personality and Individual Differences*, 164, 110121. <https://doi.org/10.1016/j.paid.2020.110121>
130. Newcomb, M. D., and Harlow, L. L. (1986). Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaninglessness in life. *Journal of Personality and Social Psychology*, 51(3), 564–577. <https://doi.org/10.1037/0022-3514.51.3.564>
131. Nickerson, C. (2023, November 3). *Light Triad of Personality*. <https://www.simplypsychology.org/Light-Triad-Personality.html>. <https://www.simplypsychology.org/light-triad-personality.html>
132. Nietzsche, F. (1997). *Twilight of the idols [Translated by Richard Polt]*. Indianapolis, IN, USA: Hackett. (Original work published 1889)
133. Oades, L. G., and Mossman, L. (2017). *The Science of Wellbeing and Positive Psychology* (A. Jarden, L. Oades, and M. Slade, Eds.). Cambridge University Press; Cambridge University Press. <https://www.cambridge.org/core/books/wellbeing-recovery-and-mental-health/science-of-wellbeing-and-positive-psychology/CECF4433A7DCE7BB5385C9AA5E890972>
134. Oakes, K. (2019). *The “light triad” that can make you a good person*. www.bbc.com. <https://www.bbc.com/future/article/20190617-the-light-triad-that-can-make-you-a-good-person>

135. Overton, S. (2022). *Personality Traits in the Workplace: Examining the Light Triad and Personality Traits in the Workplace: Examining the Light Triad and its Relationship with Job Satisfaction its Relationship with Job Satisfaction* [Honors College Theses Student Works].
136. Pallegedara, A., and Grimm, M. (2017). Demand for private healthcare in a universal public healthcare system: empirical evidence from Sri Lanka. *Health Policy and Planning*, 32(9), 1267–1284. <https://doi.org/10.1093/heapol/czx085>
137. Papathanasiou, I., Kleisiaris, C., Tsaras, K., Fradelos, E., and Kourkouta, L. (2015). General Satisfaction Among Healthcare Workers: Differences Between Employees in Medical and Mental Health Sector . *Materia Socio Medica*, 27(4), 225. <https://doi.org/10.5455/msm.2015.27.225-228>
138. Park, C. L., Knott, C. L., Williams, R. M., Clark, E. M., Williams, B. R., and Schulz, E. (2020). Meaning in Life Predicts Decreased Depressive Symptoms and Increased Positive Affect over Time but Does not Buffer Stress Effects in a National Sample of African-Americans. *Journal of Happiness Studies*, 21(8), 3037–3049. <https://doi.org/10.1007/s10902-019-00212-9>
139. Paulhus, D. L. (2014). Toward a Taxonomy of Dark Personalities. *Current Directions in Psychological Science*, 23(6), 421–426. <https://doi.org/10.1177/0963721414547737>
140. Paulhus, D. L., and Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and Psychopathy. *Journal of Research in Personality*, 36(6), 556–563. [https://doi.org/10.1016/s0092-6566\(02\)00505-6](https://doi.org/10.1016/s0092-6566(02)00505-6)
141. Pavot, W., and Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3(2), 137–152. <https://doi.org/10.1080/17439760701756946>
142. Pearson, P. R., and Sheffield, B. F. (1989). Psychoticism and purpose in life. *Personality and Individual Differences*, 10(12), 1321–1322. [https://doi.org/10.1016/0191-8869\(89\)90245-6](https://doi.org/10.1016/0191-8869(89)90245-6)
143. Peterson, C., Park, N., and Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: the full life versus the empty life. *Journal of Happiness Studies*, 6(1), 25–41. <https://doi.org/10.1007/s10902-004-1278-z>
144. Pillay, Y., and Mahlati, P. (2008). Health-worker salaries and incomes in sub-Saharan Africa. *The Lancet*, 371(9613), 632–634. [https://doi.org/10.1016/s0140-6736\(08\)60283-4](https://doi.org/10.1016/s0140-6736(08)60283-4)

145. Powdthavee, N., Lekfuangfu, W. N., and Wooden, M. (2015). What's the good of education on our overall quality of life? A simultaneous equation model of education and life satisfaction for Australia. *Journal of Behavioral and Experimental Economics*, 54, 10–21. <https://doi.org/10.1016/j.socec.2014.11.002>
146. Prasad, K., McLoughlin, C., Stillman, M., Poplau, S., Goelz, E., Taylor, S., Nankivil, N., Brown, R., Linzer, M., Cappelucci, K., Barbouche, M., and Sinsky, C. A. (2021). Prevalence and correlates of stress and burnout among U.S. healthcare workers during the COVID-19 pandemic: A national cross-sectional survey study. *EClinicalMedicine*, 35, 100879. <https://doi.org/10.1016/j.eclinm.2021.100879>
147. Prason, R., and Chaturvedi, K. (2016). Life satisfaction: a literature review. *Int J Manag Humanit Soc Sci*, 25–32.
148. Reker, G. T. (1997). Personal Meaning, Optimism, and Choice: Existential Predictors of Depression in Community and Institutional Elderly. *The Gerontologist*, 37(6), 709–716. <https://doi.org/10.1093/geront/37.6.709>
149. Reker, G. T., and Wong, P. T. P. (1988). Aging as an individual process: Toward a theory of personal meaning. In J. E. Birren and V. L. Bengston (Eds.), *Handbook of theory of aging*. New York: Springer.
150. Rodríguez, E. A., Agüero-Flores, M., Landa-Blanco, M., Agurcia, D., and Santos-Midence, C. (2021). Moral Injury and Light Triad Traits: Anxiety and Depression in Health-Care Personnel During the Coronavirus-2019 Pandemic in Honduras. *Hispanic Health Care International*, 19(4), 230–238. <https://doi.org/10.1177/15404153211042371>
151. Russo-Netzer, P., Horenczyk, G., and Bergman, Y. S. (2021). Affect, meaning in life, and life satisfaction among immigrants and non-immigrants: A moderated mediation model. *Current Psychology*. <https://doi.org/10.1007/s12144-019-00284-z>
152. Ryff, C. D., and Singer, B. (1998). The Contours of Positive Human Health. *Psychological Inquiry*, 9(1), 1–28. https://doi.org/10.1207/s15327965pli0901_1
153. Salazar de Pablo, G., Vaquerizo-Serrano, J., Catalan, A., Arango, C., Moreno, C., Ferre, F., Shin, J. I., Sullivan, S., Brondino, N., Solmi, M., and Fusar-Poli, P. (2020). Impact of coronavirus syndromes on physical and mental health of health care workers: Systematic review and meta-analysis. *Journal of Affective Disorders*, 275, 48–57. <https://doi.org/10.1016/j.jad.2020.06.022>

154. Scheier, M. F., and Carver, C. S. (1993). On the Power of Positive Thinking: The Benefits of Being Optimistic. *Current Directions in Psychological Science*, 2(1), 26–30. <https://doi.org/10.1111/1467-8721.ep10770572>
155. Schulenberg, S. E., Hutzell, R. R., Nassif, C., and Rogina, J. M. (2008). Logotherapy for clinical practice. *Psychotherapy: Theory, Research, Practice, Training*, 45(4), 447–463. <https://doi.org/10.1037/a0014331>
156. Schutte, J. W., Valerio, J. K., and Carrillo, V. (1996). OPTIMISM AND SOCIOECONOMIC STATUS: A CROSS-CULTURAL STUDY. *Social Behavior and Personality: An International Journal*, 24(1), 9–18. <https://doi.org/10.2224/sbp.1996.24.1.9>
157. Seligman, M. (2011). *Martin Seligman on Psychology*. Pursuit-of-Happiness.org. <https://www.pursuit-of-happiness.org/history-of-happiness/martin-seligman-psychology/>
158. Seligman, M. E. (1999). The president's address. *Am. Psychol*, 54, 559–562.
159. Seligman, M. E. P. (2002). *Authentic happiness : using the new positive psychology to realize your potential for lasting fulfilment*. Nicholas Brealey Publishing.
160. Seligman, M. E. P., and Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14. <https://doi.org/10.1037//0003-066x.55.1.5>
161. Shaikh, C. F., Kelly, E. P., Paro, A., Cloyd, J., Ejaz, A., Beal, E. W., and Pawlik, T. M. (2022). Burnout Assessment Among Surgeons and Surgical Trainees During the COVID-19 Pandemic: A Systematic Review. *Journal of Surgical Education*. <https://doi.org/10.1016/j.jsurg.2022.04.015>
162. Shanafelt, T. D. (2011). Special report: Suicidal ideation among American surgeons. *Archives of Surgery*, 146(1), 54. <https://doi.org/10.1001/archsurg.2010.292>
163. Shanafelt, T. D. (2021). Physician Well-being 2.0: Where Are We and Where Are We Going? *Mayo Clinic Proceedings*, 96(10), 2682–2693. <https://doi.org/10.1016/j.mayocp.2021.06.005>
164. Shanafelt, T. D., Balch, C. M., Bechamps, G. J., Russell, T., Dyrbye, L., Satele, D., Collicott, P., Novotny, P. J., Sloan, J., and Freischlag, J. A. (2009). Burnout and Career Satisfaction Among American Surgeons. *Transactions of the ... Meeting of the American Surgical Association*, 127, 107–115. <https://doi.org/10.1097/sla.0b013e3181ac4dfd>

165. Shanafelt, T. D., Balch, C. M., Bechamps, G., Russell, T., Dyrbye, L., Satele, D., Collicott, P., Novotny, P. J., Sloan, J., and Freischlag, J. (2010). Burnout and Medical Errors Among American Surgeons. *Annals of Surgery*, 251(6), 995–1000. <https://doi.org/10.1097/sla.0b013e3181bfdab3>
166. Shanafelt, T. D., and Noseworthy, J. H. (2017). Executive Leadership and Physician Well-being. *Mayo Clinic Proceedings*, 92(1), 129–146.
167. Shanafelt, T. D., Sloan, J. A., and Habermann, T. M. (2003). The well-being of physicians. *The American Journal of Medicine*, 114(6), 513–519. [https://doi.org/10.1016/s0002-9343\(03\)00117-7](https://doi.org/10.1016/s0002-9343(03)00117-7)
168. Shanafelt, T., Ripp, J., and Trockel, M. (2020). Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic. *JAMA*, 323(21). <https://doi.org/10.1001/jama.2020.5893>
169. Shanafelt, T., Sloan, J., Satele, D., and Balch, C. (2011). Why Do Surgeons Consider Leaving Practice? *Journal of the American College of Surgeons*, 212(3), 421–422. <https://doi.org/10.1016/j.jamcollsurg.2010.11.006>
170. Sheldon, K. M., and King, L. (2001). Why positive psychology is necessary. *American Psychologist*, 56(3), 216–217. <https://doi.org/10.1037/0003-066x.56.3.216>
171. SHERMAN, A. C., EDWARDS, D., SIMONTON, S., and MEHTA, P. (2006). Caregiver stress and burnout in an oncology unit. *Palliative and Supportive Care*, 4(1), 65–80. <https://doi.org/10.1017/s1478951506060081>
172. Shin, D. C., and Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, 5(1-4), 475–492. <https://doi.org/10.1007/bf00352944>
173. Singh, M., Parashar, M., and Lal, P. (2018). *Life Satisfaction and Correlates among Working Women of a Tertiary Care Health Sector: A Cross Sectional Study from Delhi*. www.heraldopenaccess.us. <https://www.heraldopenaccess.us/openaccess/life-satisfaction-and-correlates-among-working-women-of-a-tertiary-care-health-sector-a-cross-sectional-study-from-delhi>
174. Śliwiński, Z., Starczyńska, M., Kotela, I., Kowalski, T., Kryś-Noszczyk, K., Lietz-Kijak, D., Kijak, E., and Makara-Studzińska, M. (2014). Life satisfaction and risk of burnout among men and women working as

- physiotherapists. *International Journal of Occupational Medicine and Environmental Health*, 27(3).
<https://doi.org/10.2478/s13382-014-0266-8>
175. Snyder, C. R., and Lopez, S. J. (2001). *Handbook of Positive Psychology*. Oxford University Press.
176. Soler-Gonzalez, J., San-Martín, M., Delgado-Bolton, R., and Vivanco, L. (2017). Human Connections and Their Roles in the Occupational Well-being of Healthcare Professionals: A Study on Loneliness and Empathy. *Frontiers in Psychology*, 8(1475). <https://doi.org/10.3389/fpsyg.2017.01475>
177. Sonnentag, S. (2018). The recovery paradox: Portraying the complex interplay between job stressors, lack of recovery, and poor well-being. *Research in Organizational Behavior*, 38, 169–185.
<https://doi.org/10.1016/j.riob.2018.11.002>
178. Spickard, Jr, A. (2002). Mid-Career Burnout in Generalist and Specialist Physicians. *JAMA*, 288(12), 1447.
<https://doi.org/10.1001/jama.288.12.1447>
179. Steger, M. F., and Frazier, P. (2005). Meaning in Life: One Link in the Chain From Religiousness to Well-Being. *Journal of Counseling Psychology*, 52(4), 574–582. <https://doi.org/10.1037/0022-0167.52.4.574>
180. Steger, M. F., Frazier, P., Oishi, S., and Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53(1), 80–93.
<https://doi.org/10.1037/0022-0167.53.1.80>
181. Steger, M. F., and Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies*, 8(2), 161–179. <https://doi.org/10.1007/s10902-006-9011-8>
182. Steger, M. F., Oishi, S., and Kashdan, T. B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology*, 4(1), 43–52. <https://doi.org/10.1080/17439760802303127>
183. Stojanov, J., Malobabic, M., Stanojevic, G., Stevic, M., Milosevic, V., and Stojanov, A. (2020). Quality of sleep and health-related quality of life among health care professionals treating patients with coronavirus disease-19. *International Journal of Social Psychiatry*, 002076402094280.
<https://doi.org/10.1177/0020764020942800>

184. Suldo, S. M., and Huebner, E. S. (2004). Does life satisfaction moderate the effects of stressful life events on psychopathological behavior during adolescence? *School Psychology Quarterly*, 19(2), 93–105. <https://doi.org/10.1521/scpq.19.2.93.33313>
185. Suryavanshi, N., Kadam, A., Dhumal, G., Nimkar, S., Mave, V., Gupta, A., Cox, S. R., and Gupte, N. (2020). Mental health and quality of life among healthcare professionals during the COVID-19 pandemic in India. *Brain and Behavior*, 10(11). <https://doi.org/10.1002/brb3.1837>
186. Teixeira-Poit, S. M., Halpern, M. T., Kane, H. L., Keating, M., and Olmsted, M. (2017). Factors influencing professional life satisfaction among neurologists. *BMC Health Services Research*, 17(1). <https://doi.org/10.1186/s12913-017-2343-8>
187. Testoni, I., Francioli, G., Biancalani, G., Libianchi, S., and Orkibi, H. (2021). Hardships in Italian Prisons During the COVID-19 Emergency: The Experience of Healthcare Personnel. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.619687>
188. Thompson, S. C., and Janigian, A. S. (1988). Life Schemes: A Framework for Understanding the Search for Meaning. *Journal of Social and Clinical Psychology*, 7(2-3), 260–280. <https://doi.org/10.1521/jscp.1988.7.2-3.260>
189. Townsley, A. P., Li-Wang, J., and Katta, R. (2023). Healthcare Workers' Well-Being: A Systematic Review of Positive Psychology Interventions. *Cureus*, 15(1). <https://doi.org/10.7759/cureus.34102>
190. Uchmanowicz, I., Manulik, S., Lomper, K., Rozensztrauch, A., Zborowska, A., Kolasińska, J., and Rosińczuk, J. (2019). Life satisfaction, job satisfaction, life orientation and occupational burnout among nurses and midwives in medical institutions in Poland: a cross-sectional study. *BMJ Open*, 9(1), e024296. <https://doi.org/10.1136/bmjopen-2018-024296>
191. Vail III, K. E., and Routledge, C. (Eds.). (2020). *Science Of Religion, Spirituality, And Existentialism*. Elsevier Academic Press.
192. van Geel, M., Goemans, A., Toprak, F., and Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and Individual Differences*, 106, 231–235. <https://doi.org/10.1016/j.paid.2016.10.063>

193. Veenhoven, R. (1996). Developments in satisfaction-research. *Social Indicators Research*, 37(1), 1–46. <https://doi.org/10.1007/bf00300268>
194. Vizheh, M., Qorbani, M., Arzaghi, S. M., Muhidin, S., Javanmard, Z., and Esmaeili, M. (2020). The Mental Health of Healthcare Workers in the COVID-19 Pandemic: A Systematic Review. *Journal of Diabetes and Metabolic Disorders*, 19(2), 1967–1978. <https://doi.org/10.1007/s40200-020-00643-9>
195. Wallace, J. E., Lemaire, J. B., and Ghali, W. A. (2009). Physician wellness: a missing quality indicator. *Lancet (London, England)*, 374(9702), 1714–1721. [https://doi.org/10.1016/S0140-6736\(09\)61424-0](https://doi.org/10.1016/S0140-6736(09)61424-0)
196. Wang, Q., Wang, L., Shi, M., Li, X., Liu, R., Liu, J., Zhu, M., and Wu, H. (2019). Empathy, burnout, life satisfaction, correlations and associated socio-demographic factors among Chinese undergraduate medical students: an exploratory cross-sectional study. *BMC Medical Education*, 19(1). <https://doi.org/10.1186/s12909-019-1788-3>
197. Waris Nawaz, M., Imtiaz, S., and Kausar, E. (2020). SELF-CARE OF FRONTLINE HEALTH CARE WORKERS: DURING COVID-19 PANDEMIC. *Psychiatria Danubina*, 32(3-4), 557–562. <https://doi.org/10.24869/psyd.2020.557>
198. Weinstein, L., and Cleanthous, C. C. (1996). A comparison of protestant ministers and parishioners on expressed purpose in life and intrinsic religious motivation. *Psychology: A Journal of Human Behavior*.
199. West, C. P. (2009). Association of Resident Fatigue and Distress With Perceived Medical Errors. *JAMA*, 302(12), 1294. <https://doi.org/10.1001/jama.2009.1389>
200. WHO. (1993). Study protocol for the World Health Organization project to develop a Quality of Life assessment instrument (WHOQOL). *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care and Rehabilitation*, 2(2), 153–159. <https://pubmed.ncbi.nlm.nih.gov/8518769/>
201. Wijayatunga, S. L. (2021). *Life Satisfaction among Healthcare Workers: A Cross-Sectional Study in Private Hospitals in Ragama, Sri Lanka*. Ijip.in. <https://ijip.in/pdf-viewer/?id=37066>
202. Williams, K. M., Nathanson, C., and Paulhus, D. L. (2010). Identifying and profiling scholastic cheaters: their personality, cognitive ability, and motivation. *Journal of Experimental Psychology. Applied*, 16(3), 293–307. <https://doi.org/10.1037/a0020773>

203. Wong, P. T. (1998). Implicit theories of meaningful life and the development of the Personal Meaning Profile. In P. T. Wong and P. Fry (Eds.), *The human quest for meaning* (pp. 111–140). Mahwah, NJ: Erlbaum.
204. Wong, P. T. P., and Fry, P. S. (1998). *The human quest for meaning : a handbook of psychological research and clinical applications*. Erlbaum.
205. WorkLife, V. (2015, April 23). *New Study: Physician Stress and Burnout Reaching Crisis Levels, Causing Many to Leave Their Practices*. Insights.vitalworklife.com. <https://insights.vitalworklife.com/blog/2015/04/23/stress>
206. Wrosch, C., and Scheier, M. F. (2003). Personality and Quality of Life: The Importance of Optimism and Goal Adjustment. *Quality of Life Research*, 12(1suppl), 59–72. <https://doi.org/10.1023/a:1023529606137>
207. Wu, P.-L., and Chiou, W.-B. (2009). More Options Lead to More Searching and Worse Choices in Finding Partners for Romantic Relationships Online: An Experimental Study. *CyberPsychology and Behavior*, 12(3), 315–318. <https://doi.org/10.1089/cpb.2008.0182>
208. Yalom, V. (1980). *Existential Psychotherapy*.
209. Yang, T., Ma, T., Liu, P., Liu, Y., Chen, Q., Guo, Y., Zhang, S., and Deng, J. (2019). Perceived social support and presenteeism among healthcare workers in China: the mediating role of organizational commitment. *Environmental Health and Preventive Medicine*, 24(1). <https://doi.org/10.1186/s12199-019-0814-8>
210. Young, A. S., Klap, R., Sherbourne, C. D., and Wells, K. B. (2001). The Quality of Care for Depressive and Anxiety Disorders in the United States. *Archives of General Psychiatry*, 58(1), 55. <https://doi.org/10.1001/archpsyc.58.1.55>
211. Zhang, X., Song, Y., Jiang, T., Ding, N., and Shi, T. (2020). Interventions to reduce burnout of physicians and nurses. *Medicine*, 99(26), e20992. <https://doi.org/10.1097/md.0000000000020992>
212. Zhao, X., Zhang, T., Li, B., Yu, X., Ma, Z., Cao, L., Gu, Q., Dong, C., Jin, Y., Fan, J., and He, G. (2020). Job-related factors associated with changes in sleep quality among healthcare workers screening for 2019 novel coronavirus infection: a longitudinal study. *Sleep Medicine*, 75, 21–26. <https://doi.org/10.1016/j.sleep.2020.07.027>

213. Zika, S., and Chamberlain, K. (1987). Relation of hassles and personality to subjective well-being. *Journal of Personality and Social Psychology*, 53(1), 155–162. <https://doi.org/10.1037/0022-3514.53.1.155>

Appendix

Informed Consent

Date:

Study Title or Topic: Level Of Life Satisfaction Among Medical Students: A Comparative Study

Researcher: Annie Mewara, M.Sc. Clinical Psychology, Department of Psychiatry, GMCH, Udaipur.

Purpose of the research: Generally, medical students experience a reduced amount of happiness due to lengthy studying hours. Burnout is a universal phenomenon in the medical profession. Students' those undergo burnout deliver poor health outcomes, poor quality of care and lesser Life Satisfaction. Students affirm that their quality of life is influenced by their experiences in medical school, but they also reframe their difficulties represented by their poor quality of life. This is because they understand them as necessary and inherent to the process of becoming doctors. The studies related to life satisfaction of Medical students are advantageous as it can measure quality of life; monitoring social progress and identification of conditions of good life. Since there is limited number of researches done on medical students to assess their life satisfaction, there is a scope to study the same.

Risks and Discomforts: Study does not involve any invasive procedure. I do not foresee any risks or discomfort from your participation in the research.

Voluntary Participation: Your participation in study is completely voluntary and you may refuse to answer any questions or choose to stop participating at any time.

Withdrawal from the study: You can stop participating in the study at any time, for any reason, if you so decide to withdraw from the study; all data generated as a consequence of your participation will be destroyed.

Confidentiality: All information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. Confidentiality will be provided to the fullest extent possible by law.

Questions about the research: If you have any questions about the research in general or about your role in the study, please, feel free to contact.

Annie Mewara

M.Sc. Clinical Psychology,

Department of Psychiatry,

GMCH, Udaipur,

E-mail: anniemewara021@gmail.com

Mobile No: 8890804018

I _____ exercising my free power of choice, hereby give my consent to be included as a subject in this study.

I have been informed to my satisfaction about the purpose of the study and the nature of the study.

I have been informed that there will be no payment for participation in the study.

I am also aware of my right to opt out of the study at any time during its course without having to give the reason for doing so.

Name and signature

Name and signature

Participant

Doctor

Your signature indicates that you have decided to participate, having read the information provided.

अध्ययनकाविषय: चिकित्सा छात्रों के बीच जीवन संतुष्टि का स्तर: एक तुलनात्मक अध्ययन

शोधार्थी:

एनी मेवाड़ा

नैदानिक मनोविज्ञानी

स्नातकोत्तर, मनोरोगविभाग, जी.एम्.सी.एच. उदयपुर

शोध का उद्देश्य: शोधप्रस्तुति

जोखिम और असुविधा: मुझे आपके शोध में भागीदारी के कारण कोई भी जोखिम व सुविधा नज़र नहीं आरसी।

स्वेच्छिक भागीदारी: इस शोध में आपकी भागीदारी पूर्ण: स्वैच्छिक होगी और आपका सीप्रश्न का उत्तर देने सेमना कर सकतेहैं।

अध्ययनसेवापसी: अगर आप ऐसा निर्णय लेते हैं तो आपकी सीभी समय अधययन में अपनी भागीदारी किसी भी कारण की वजह से रोक सकते हैं। अगर आप अपनी भागीदारी बंद करना चाहते हैं तो आपकी पूर्ण जानकारी जो शोध में ली गई पूर्णतः नष्टकर दी जियेगी।

गोपनीयता: आप द्वारा शोध के दौरान दी गई जानकारी गोपनीय रखी जाएगी, आपका नाम किसी भी रिपोर्ट या शोध कप्रकाशन में नहीं लिया जायेगा। आप द्वारा दी गई जानकारी बड़ी ही गोपनीय और सुरक्षित तरीके से रखी जाएगी और सिर्फ शोधकर्ता को आपकी जानकारी देखने की अनुमति होगी।

शोध के बारे में सवाल: अगर आप को शोध क दौरान कोई भी प्रश्नपूछना है या अपनी भागीदारी के बारे में कुछ भी पूछना है तो आप बिना किसी संकोचके पूछ सकते हैं।

एनी मेवाड़ा

नैदानिक मनोविज्ञानी

मनोरोगविभाग, जी.एम्.सी.एच. उदयपुर

ई-मेल: anniemewara021@gmail.com

मोबाइलनंबर: 8890804018