# MIND THE BODY: PSYCHOLOGICAL WELL-BEING AND BODY IMAGE AT THE TIME OF THE COVID-19

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### The construct of well-being

Well-being is a complex, controversial, and heterogeneous construct that largely relates to the individual's experiences and optimal psychological functioning. The research on well-being has grown considerably in recent decades and there is still an open dispute among researchers about what constitutes the good life.

As reported in the International Health Conference (2002) since 1946 the World Health Organization (WHO) defined health not simply as the absence of disease, but as a multidimensional construct that includes a complete state of intellectual, physical, emotional, and social well-being. Therefore, the focus of research has shift-

ed towards the identification and the study of essential psychological constructs, such as personal growth (Ryff, 1989), life satisfaction (Diener, 1984), and well-being promotion (Cowen, 1991).

The significant increase in interest for the study of well-being is probably due to the affirmation of the positive psychology movement and recognition of the importance of well-being both for the individual and society as a whole. Positive psychology is a generic term that indicates a range of theories and research about what makes life worthwhile (Seligman & Csikszentmihalyi, 2000). Seligman (2002) introduced a concept of dynamic well-





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being that distances itself from theories that focus only on happiness. The author argues that the main theme of this discipline is well-being in the broadest sense and not just happiness, and that its goal is to increase the concept of flourishing. It can be defined as prosperity of the individual, through the development of a series of elements that contribute to a fulfilling life: positive emotion, commitment, relationships, meaning, and fulfillment. Therefore, the positive psychology movement focuses on human virtues – the so-called strengths (Park et al., 2004) – as well as on the best quality of life (Seligman, 2002) and on the optimal functioning of people, groups and institutions. Strengths refer to a disposition to feel, desire, and act, which leads to a recognizable personal excellence or to the instance of human prosperity.

Shine and Johnson (1978) provided an interesting interpretation of well-being as an overall evaluation of individual quality of life, based on personal criteria (e.g., success in living values, satisfaction in life; appearance appreciation); however, this assumption doesn't provide a clear and accurate definition of quality of life. In this regard, the World Health Organization Quality of Life Group (WHO-QOL Group, 1995) defined life's quality as the perception of individuals of their position in life, in the context of culture and value system in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad concept, largely influenced by the physical health, psychological states, personal beliefs, social relationship, and by their connection with the environmental characteristics. Therefore, the main interest of researchers and psychologists today is to integrate several psychological constructs, which have been identified as important components of positive well-being, such as self-esteem, self-acceptance, resilience and coping (e.g., McDowell, 2010).

# The different conceptions of well-being: hedonic, eudaimonic, wellness

Most empirical research on well-being is based on the distinction between two alternative conceptions of happiness: the hedonic and eudaimonic perspective (Ryan & Deci, 2001).

In 1969, Bradburn identified the psychological and emotional reactions that commonly occur among individuals in difficult daily life circumstances (anger, guilt, shame, disappointment or gratitude, pride, motivation, trust, satisfaction, etc.), distinguishing between positive and negative emotions. He suggested that individuals will report a high level of psychological well-being if they experience more positive than negative affect. Positive affect refers to the extent to which an individual subjectively experiences positive moods (e.g., joy, enthusiasm, energy, sociability) and consequently how he interacts with others and his environment. Negative affect is a broad concept that can be defined as feelings of emotional distress, that is the common variance between anxiety, sadness, fear, nervousness, guilt and shame, and other unpleasant emotions (Díaz-García et al., 2020).

This conception of well-being inspired later works that led to the conceptualization of the hedonic perspective, theorized by Diener (1984), and the eudaimonic perspective, whose greatest contribution is attributable to Ryff (1989). The hedonic or subjective well-being consists of three interconnected components: life satisfaction, high positive affect, and low negative affect. The balance between these elements defines the overall judgment of well-being. Therefore, happiness is understood as the product of individual experiences, in terms of seeking needs satisfaction, maximizing pleasure and positive emotions, and minimizing the painful ones.

The eudaimonic, or psychological, approach affirms that happiness is obtained through the satisfaction of one's own potential and the realization of one's own true nature; in this way, the aspects related to positive human functioning are highlighted. Rogers (1978) was the first to speak of a formative tendency, meaning by this term a personal drive towards the completion, actualization, conservation, and improvement of oneself. His important contribution strongly inspired the following works by Ryff (1989). According to Ryff (1989), eudaimonic or psychological well-being consists of six essential dimensions: self-acceptance, autonomy, personal growth, purpose in



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life, positive relationships with others, and environmental mastery. All these dimensions represent aspects of optimal psychological functioning and determine the levels of physical, mental, and emotional health necessary to define the presence of well-being.

According to Keyes (2007), mental health can ultimately be described as a syndrome of symptoms of subjective well-being, only attainable if people experience high levels across both domains (hedonic and eudaimonic) that allow them to function positively.

In addition to these two main approaches, there is a third one that defines well-being as wellness, i.e. a holistic, multilevel and multidimensional construct that also integrates a social and spiritual dimension with a fully functioning personality (Linton et al., 2016), along a past, present, and future perspective. Therefore, well-being can be expressed through seven areas: general, interpersonal, community, professional, physical, psychological, and economic (Prilleltensky et al., 2015).

Thanks to this contribution, the attention of research has shifted from an individualistic conception of well-being to a more ecological position. The latter is considered as a subjective experience influenced by interpersonal relationships, the environment, and the social context (Gremigni, 2013), which in turn affects mind and body and the relationship between them. Undoubtedly, all or some of the well-being areas mentioned above have been impacted as an inevitable consequence of the rapid spread of infections due to the COVID-19 pandemic and the related recommended health-preventive behaviors.

A question that clinicians increasingly ask is: what do people need for their well-being? Questions related to the psychological well-being and mental health of the individual have been, and still are, the subject of research for many years. In this regard, some studies (Chen et al., 2015; Neubauer & Voss, 2016; Reis et al., 2000) suggest that well-being seems to be associated with the satisfaction of the basic psychological needs. This assumption is well expressed by the Basic Psychological Needs Theory (BPNT), a sub-theory of the Self-determination Theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2000). The BPNT posits that individual well-being is a result of the satisfaction of three basic psychological needs: autonomy –acting independently by experiencing self-determination, volition, freedom of choice, and internal locus of control; competence – feeling effective and capable to act in one's environment to achieve desired results; relatedness – experience of intimacy and emotional connection with others, and genuine and positive interpersonal relationships in one's social context. These innate needs represent a general condition that favors greater well-being (Ryan & Deci, 2000). In contrast, their frustration could lead to maladjustment and even psychopathology (e.g., Neufeld et al., 2020).

Some studies have shown that stressful and negative life events can contribute to the failure to fulfill these needs resulting in lower psychological well-being (e.g., Chen et al., 2015). Specifically, some studies showed that the frustration of needs seems to be strongly associated with psychopathology, causing different maladaptive outcomes, including physiological discomfort (Bartholomew et al., 2011) or eating disorders (EDs; Ng et al., 2013; Verstuyf et al., 2013). On the other hand, several studies (e.g., Chen et al., 2015) have highlighted comparable associations between the satisfaction of basic needs and well-being in different cultures and periods of life (Ryan & Deci, 2001). Indeed, a successful satisfaction of psychological needs was found to be correlated with positive outcomes of well-being, such as better self-esteem (Deci et al., 2001), higher life satisfaction, and positive affect (Diener, 2012). These beneficial effects seem to be transversal to multiple domains and stages of life, such as work, school and education, health care, retirement (Henning et al., 2019; Zhou et al., 2020a). We can assume that a poor or a lack of needs' satisfaction, which lasts over time, can have significant repercussions at the level of global well-being and healthy functioning, altering our balances, rhythms, and habits of life.

Health and well-being at the time of the COVID-19 Globally, the current COVID-19 pandemic is a particularly stressful life event that appears to limit many of our individual needs.



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The high transmission rate of this virus has forced the whole world to implement drastic measures to contain the infections, such as the promotion of personal protective device, the use of face masks and shields, hand hygiene, social distancing, cleaning and sanitization of surfaces and spaces, travel restrictions, smart working conditions, and guarantine for infected people. It is an unprecedented challenge, with immediate and devastating impacts on our daily lives and relationships, which have changed considerably since we had to distance ourselves socially. The Governor of New York, Andrew M. Cuomo, said that we are fighting fear because disinformation, negative emotions, disorientation, anxiety, and panic are more dangerous than the virus itself. He argues that too often we focus on the economic consequences only, while we should talk more about the social consequences of the limitations of our needs (Wright, 2020). Stress and emotions caused by this crisis are very maladaptive, and people are struggling with the emotions as much as they are struggling with the economics.

The isolation, the restriction of our freedoms, the loss or estrangement from our loved ones, the uncertainty about our future life have had wide and dramatic effects on our health, which may persist even after the end of quarantine. Some studies have found that feelings of anxiety and anger persisted even four to six months after removal from isolation (Chouchou et al., 2020). Indeed, suicidal thoughts, symptoms of depression and overwhelming stress are not uncommon, as reported by Ahmed (2020). Furthermore, the still increasing number of suspected or confirmed cases and news about the virus and its transmission constantly subject people to different degrees of mental suffering, causing them tensions, fears, nervousness, acute stress reactions, and various symptoms of psychological pressure (Haghani et al., 2020).

Several studies have confirmed the psychological damage caused by the COVID-19 pandemic and the serious consequences on mental and physical health. A study conducted in the United States reported that about 45% of adults refers to a deterioration in mental health since the beginning of the containment and prevention measures promoted to respond to the health emergency in March 2020 (Panchal et al., 2020). This result may be due to several factors. In fact, the COVID-19 pandemic has affected communities at

various levels, leading to an overload of the healthcare system, a significant decline in employment and disposable income, and the consequent fragility of the labor market, which have led many families to a condition of economic crisis and scarcity of resources (Lemieux et al., 2020; Mayhew & Anand, 2020). These problems have led to an additional burden of stress, anxiety, insecurity, and instability in people's daily lives.

#### Impact of the lockdown on the mind and body

Governments measures seem to be effective in preventing the transmission of the COVID-19, limiting the number of new contagions significantly.

Certainly, an extraordinary situation like the one we are experiencing can trigger a series of different responses in populations around the world, such as the worry of contracting the disease, the fear of others and of contact, and a distorted perception (overestimation or underestimation) of the actual risk. A psychological aspect widespread and shared by all the people is fear, defined as an unpleasant emotional state triggered by the perception of threatening stimuli (de Hoog, Stroebe, & de Wit, 2008). It's an intense emotional experience, which occurs when people have to face potentially dangerous situations, for themselves or for others, but without any possibility or ability to change them. A study on the US population, conducted through an online survey, reports that 56% of participants out of a total of 808 subjects said they were worried or very anxious about the spread of the COVID-19 in their country and for the possibility of contracting the infection (Pakpour & Griffiths, 2020). Faced with a health emergency of this magnitude it is completely normal to manifest some degree of fear, anxiety, and worry as healthy reactions of the organism to the psychological stress we are subjected to (Haghani et al., 2020). However, higher levels of these emotions and maladaptive coping strategies can cause, in the long term, the onset of new symptoms and an imbalance in the functioning of both the mind with symptoms of anxiety, hypochondria, pessimism, impotence, and the body with negative consequences for health, such a neuroendocrine and respiratory systems' disfunctions, EDs and malnutrition (Haghani et al., 2020). Some studies (e.g., Rodgers et al., 2020) suggested EDs behaviors are likely to be exacerbated by the pandemic through multiple pathways,



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particularly among vulnerable groups, including those with body image and eating concerns. Research related to the effects of the COVID-19 has identified EDs as a particularly important priority (Holmes et al., 2020).

Increased anxiety and stress caused by the pandemic, as well efforts to reduce its spread, may have adverse effects on other aspects of mental health (Reger et al., 2020), such as EDs symptomatology (Touyz et al., 2020). It is also possible that the pandemic presents a threat to body image (Cooper et al., 2020). In order to understand the effects that the pandemic can have on the body and on the body image of individuals, it is appropriate to start with some definitions. Slade (1994) describes the body image as the image we have in our mind of the shape, size of our body and the feelings we feel about these characteristics and the individual parts of it (Slade, 1994): that is, the subjective representation that each person has of their own body. According to Slade (1994), the body image is made up of a perceptive component (that is, how the person visualizes the size and shape of their body); an attitudinal component (that is, what the person cognitively thinks of their body and how they approach); an affective component (that is, the feelings related to one's appearance); and, finally, a behavioral component (that is, for example, nutrition and physical activity). Considering the different components that make up a person's body image, it is clear how it includes the individual as a whole, in all aspects of his being and therefore their relevance and complexity (e.g., Thomas & Warren-Findlow, 2020; Tylka & Wood -Barcalow, 2015). This definition allows us to understand the complexity of the image that each of us has of our own body and the possible influences that can act on it at a cognitive, emotional, and behavioral level.

#### Changes and restrictions of daily habits

It is possible to observe how the pandemic has led to numerous restrictions and interruptions in daily activities (e.g., restrictions on work activities, travel, gym attendance, etc.).

Restrictions on activities have important consequences on some of the main habits closely related to body image. Think of changes in eating habits or changes in physical activity. These alterations can influence or increase the risk of developing or exacerbating EDs related symptoms. The absence of a clear routine for meals, alterations in the sleep-wake rhythm, or a poor separation between the home and the area dedicated to work, can increase the likelihood of typical symptoms of EDs (Heriseanu et al., 2017). Another important aspect to consider is that, in many countries, the only activity allowed was shopping. This can have a twofold consequence: on the one hand, it would increase the time dedicated to planning what to buy, and therefore the focus on food; on the other hand, the probability of concentrating on food seems to have increased the fear of becoming food deprived. This activity would favor the tendency in individuals to stock up on food more than they usually would, increasing the frequency of purchasing junk food (Waters et al., 2001). The wide availability of food and the focus of attention on nutrition would increase the likelihood of resorting to food binges.

Psychological stress caused by a global pandemic can have an immediate impact on food-related behavior, promoting impulsive and uncontrolled food intake. With regard to eating habits, several studies have also found a significant association between quarantine and weight gain (Clemmensen et al., 2020; Mattioli et al., 2020; Pellegrini et al., 2020). One possible explanation for this increase is that an abundance of energy-rich, palatable, affordable, and readily available food promotes caloric intake that exceeds daily energy needs. In addition, home confinement away from significant people is also likely to make maintaining body weight and a healthy lifestyle more difficult, as it has been found that individuals with limited social interactions have a higher risk of developing obesity (Kim et al., 2006). Specifically, change in eating habits during self-isolation seems to frequently evolve in over-eating, which indicates people's tendency to eat emotionally, namely the need to eat as a coping compensatory strategy to relieve tensions, anxiety and stress (Clemmensen et al., 2020). Weight gain favored by guarantine can been described as a parallel epidemic to the COVID-19 that represents a serious risk to global health. Obesity has often been associated with an increased mortality rate in infected patients, therefore it requires more vigilance, priority on identifying cases at risk, and implementing appropriate interventions (Cai et al., 2020; Dietz & Santos-Burgoa, 2020; Hussain et al., 2020; Nakeshbandi et al., 2020). Indeed, quarantine or self-isolation can perpetuate the excessive consumption of



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unhealthy food in different ways, both in the form of emotional coping (such as loneliness or decreased interpersonal relationships) and challenges (previous illnesses, states of abstinence, difficulty in obtaining basic needs). Overall, these variables represent a risk for the onset of a self-maintaining negative circle, as confirmed by the evidence that underline how overweight and obesity have negative impacts on psychophysical health, increasing personal susceptibility to contract infections or other diseases (Maugeri et al., 2020; Mediouni et al., 2020; Zachary et al., 2020). Epidemiological and public health studies in the literature agree that a balanced diet and a healthy lifestyle are essential components of long-term health promotion, influencing the immune system of individuals and their responses to critical situations.

In addition to the immoderate increase in energy intake, also physical inactivity and sleep disturbances represent additional risk factors (Carriedo et al., 2020; Chouchou et al., 2020). The important role of regular physical activity in individual susceptibility to chronic diseases and infections has been confirmed, for example, by the increased risk for hospitalization and mortality due the COVID-19 in obese or overweight people compared to those with normal weight (Huang et al., 2020). In particular, recent studies (Chouchou et al., 2020; Touyz et al., 2020) showed that disturbed or reduced sleep and sedentary behaviors are predictors of depression, anxiety, and various physical health risks such as cardiovascular vulnerability, premature aging, muscle atrophy, reduced bone strength, and unchecked weight gain. Furthermore, a study conducted in Italy (Maugeri et al., 2020) examined the correlation between physical activity and well-being during quarantine. They found a strong impact of physical activity on individuals' self-reported levels of well-being, while the reduction in physical activity was associated with lower psychophysical well-being (e.g., higher levels of anxiety, depressed mood). This general decline negatively affects self-esteem, the relationship with one's own body, and evaluation of own life satisfaction, especially in women as compared to men (Maugeri et al., 2020). The difficulty of staying physically active during prolonged isolation (e.g., over two weeks) can cause a variety of symptoms, mainly an increase in stress and depression due to social detachment. Physical activity has proven very useful in mitigating these aspects of psychological suffering, as well as in all those clinical conditions most frequently in comorbidity with severe COVID-19 that required hospitalization, such as diabetes, hypertension and cardiovascular disease (Dwyer et al., 2020). Therefore, it's advisable to follow the WHO global recommendations, which suggest practicing regular home-exercises for the multiple benefits of physical and mental health observed in different clinical populations (WHO, 2020).

In addition to changes related to food purchases, restrictions on physical activity with both temporal and spatial restrictions have been introduced in many countries; for example, only sporting activities of a certain competitive level were allowed or only for certain categories of people or, again, for a clearly limited period of time or in any case shorter than those that people would have dedicated to sport. All these restrictions severely limited access to normal physical activity, contributing, in association with unhealthy eating habits, to the likelihood of food problems of varying severity arising or worsening (Haines et al., 2010; Swami et al., 2021). Furthermore, it is important to consider that some emotional aspects, such as anxiety related to the pandemic, can also constitute a risk factor for the onset of disordered eating habits and EDs (e.g., Lombardo et al., 2020). As intimated by some scholars (e.g., Cooper et al., 2020; Rodgers et al., 2020), the stress and anxiety triggered by the COVID-19 pandemic may present unique threats to body image, possibly because of changes to daily routines (e.g., exercise, eating, and sleep patterns) that impede adaptive body image coping mechanisms and amplify maladaptive coping, heightened concerns about weight and/or shape changes, and greater frequency of negative body ruminations.

The limitations imposed by the pandemic also affected social relations. Indeed, one of the government security measures adopted worldwide is the implementation of social distance, which constitutes a strong barrier to social support, making people more vulnerable to stressful circumstances. This restriction seems to have acted in two ways. First, it would have reduced one of the main basic needs underlying psychological well-being, namely the need for relatedness, intimacy, and emotional connection with others resulting in positive interpersonal relationships in one's social context. The frustration of this need seems to produce severe psychological



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difficulties, increasing the risk of developing EDs. Secondly, the restrictions on social connection, including those imposed through physical distancing, would have reduced the actual social support received (as well as its perception). This aspect is important given that such support has been widely identified as a protective and resilient factor during periods of stress from the onset of symptoms related to the food sphere (Leonidas & Dos Santos, 2014; Linville et al., 2012).

Among the restrictions imposed by the pandemic, it is important to consider the restrictions of activities to understand the effects they can have on the level of individual psychological and emotional well-being. For example, for many people it was not possible to access psychotherapy services (Cook-Cottone, 2016), increasing the risk of incurring emotional dysregulations. Emotional dysregulation, including emotional eating, can constitute a strong risk factor for EDs (Lobera et al., 2009). The restrictions imposed by the lockdown also appear to have increased existing inequalities in access to health services. Understanding that significant access to health services occurs electronically, it is understandable how this method is discriminatory for those who do not have sufficient financial resources to guarantee such access (Mulders-Jones et al., 2017; Weissman et al., 2020).

The use of digital technologies during the COVID-19 has assumed an ambivalent role. On the one hand, it served to provide access to health services, facilitated routine administration tasks, sustained school continuity, and allowed individuals to maintain a social connection with friends, relatives, and partners. On the other hand, some research suggests that the use of Internet and social media have a played a controversial role. This aspect is pivotal if we consider that the use of social media has increased exponentially during the lockdown pandemic (Statista, 2020). Indeed, while it has allowed people to perceive themselves as being close to each other (need for relatedness), it has exacerbated certain difficulties related to body image. Given the mandated social isolation, the use of social media has increased during lockdown (Cellini et al., 2020), and the use of social networks, especially an appearance-focused use, is linked to body dissatisfaction (Cohen et al., 2017; Di Gesto et al., 2020; Fardouly & Vartanian, 2016; Holland & Tiggemann, 2016; Sherlock & Wagstaff, 2019) and low self-esteem (Liu & Baumeister 2016; Woods & Scott 2016).

#### Effects of media exposure based on appearance

The use of media, including appearance-based social media, is associated with an increased risk for disordered eating, particularly through exposure to content related to thinness and food culture, as well as food advertising (e.g., Boswell & Kober, 2016; Levine & Murnen, 2009; Rodgers & Melioli, 2016).

Social networks appear to be a powerful new source of influence on body image and have gradually become an important means of disseminating sociocultural ideals of beauty (Boursier et al., 2020; Holland & Tiggemann 2016; Perloff, 2014; Rodgers & Melioli 2016; Sun, 2020). Some studies have shown how, through social networks, users perceive which socio-cultural standards of attractiveness are considered socially desirable and, furthermore, establish the degree of their own and others' attractiveness: the evaluation of physical pleasantness represents a central element of the use of social media (e.g., Brown & Tiggemann, 2016; Fardouly & Vartanian, 2015; Holland & Tiggemann, 2016; Meier & Gray, 2014). Research relating to the association between the use of social media and body image has expanded in recent years. Recent correlational studies have found that the use of social networks is positively associated with body image disorders (e.g., Manago et al., 2015; Perrotta, 2020; Saiphoo & Vahedi, 2019). Holland and Tiggemann (2016) and Mingoia and colleagues (2017) conducted a systematic review of the literature and meta-analyses relating to the impact of social networks on body image. From these studies emerged clear indicators supporting a strong association between the use of social networks and body image disorders. Furthermore, Fardouly and Vartanian (2016), through a qualitative review of the literature on social networks and concerns about one's appearance, confirmed the presence of a positive correlation between the use of social networks and high levels of concern and anxiety for one's own body.

The idea that social networks can have negative influences on body image is quite pervasive. Social networks potentially allow the viewing, creation, and modification of content 24 hours a day, 7 days a week, on any type of electronic



**BODY STUDIES JOURNAL** A peer-reviewed open access journal for the interdisciplinary field of Body Studies **BODYSTUDIESJOURNAL.ORG** Copyright © 2021 Body Studies Journal Cabrini University • ISSN-2642-9772 device. They therefore offer multiple opportunities for social confrontation between users, much more than is possible through traditional media (Fardouly & Vartanian, 2015; Hendrickse et al., 2017; Seekis et al., 2020).

Avoidance of body image is a common feature of eating problems and posting self-images online has been shown to be harmful to body image and mood among young women (Mills et al., 2018). Video conferencing is likely to increase focus on people's faces and looks and thus have similar effects. Since this form of communication with family, friends, and the work setting is likely to continue for some time, examining the effects of "looking in the mirror" repeatedly while talking to others can be an area of interest.

In summary, the COVID-19 has strongly disrupted the daily habits of individuals, with important effects on the levels of psychophysical well-being (Holmes et al., 2020). Some studies have shown how the pandemic acts by exacerbating behaviors that can result in negative health, greatly reducing levels of psychological well-being. In particular, EDs-related behaviors appear to be particularly influenced by changes induced by the pandemic (Rodgers et al., 2020).

The current COVID-19 pandemic has created a worldwide situation that is likely to increase the risk and symptoms of EDs through different and multiple pathways, reducing individual protective factors and levels of psychological well-being and increasing barriers to access secure services.

In light of these findings, it can be argued that public policies and measures adopted by governments to contain the COVID-19 pandemic should consider a variety of factors, such as those mentioned above, that have the potential to prevent the onset of psychological and psychiatric disorders. It's very important to act on them to improve the public's judgment about their well-being and quality of life to delimit the impact of the COVID-19 in a more effective and lasting way. To the extent that negative body image is a prognostic risk factor for the onset and maintenance of eating pathology (e.g., Stice & Shaw, 2002), it is very important to highlight the influence of stressful life events, like the pandemic, on psychological well-being and individual body image. In turn, efforts to cope with negative body evaluation under conditions of lockdown will require novel mitigation interventions (e.g., telehealth, guided self-help interventions; Cooper et al., 2020; Swami et al., 2021).

# The challenges of the COVID-19: Novel mitigation interventions for body image problems

The spread of the COVID-19 and government measures aimed at reducing its spread have made it necessary to adapt to the constant changes in personal and professional life contexts. Specifically, we have seen the sudden shutdown of face-to-face services due to the likelihood of contagion, alongside a simultaneous and expected increase in demand for health services (Fisk et al., 2020; Thevarajan et al., 2020). Healthcare is experiencing a paradigmatic shift from medical paternalism to autonomous patient-centered care (van der Eijk et al., 2013) with people increasingly turning to internet technologies for support and advice (Lee et al., 2017). Therefore, a rapid transition towards adopting new ways of delivering services was urgently needed.

Unfortunately, today we find ourselves in the dramatic condition in which the burden of mental health is constantly increasing, while face-to-face access to doctors is limited and ever more infrequent (Irvine, 2020; Thornton, 2020). The consequences of the global Covid-19 pandemic have resulted in an increase in rates of mental health disorders, worsening of anxiety and depression (Torales et al., 2020; Wang et al., 2020), and a general exasperation of pre-existing clinical situations. Just think that those suffering from EDs are particularly vulnerable in periods of food insecurity, due to the lack of access to "safe" food combined with an irregular distribution of food, which triggers a "feast or famine" pattern defined by hoarding, restriction, bingeing and compensation (Bove & Olson, 2006; Lydecker & Grilo, 2019).

Thus, arises the need for new forms of assistance and online risk-assessments and screening options. However, new screening tools should address the semantic and methodological limitations of current standardized measures and be validated for online use across the EDs spectrum as defined by the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (including BED, ARFID and OSFED presentations) (Mond et al., 2007). To this end, InsideOut Institute for Eating Disorders (IOI) within the Boden Collabo-



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ration for Obesity, Nutrition, Exercise and Eating Disorders, The University of Sydney, conceptualized a short, 6-item online screening tool, the InsideOut Institute Screener (IOI-S; InsideOut Institute for Eating Disorders, 2018) to assess for EDs symptomatology/risk using non-intrusive, sensitive language designed to 'start a conversation.'

It is important to remember that not only the screening and assessment procedures for body image disorders are important but also the novel mitigations interventions. Technology, and specifically the use of telemedicine (or TeleHealth), appears to be an obvious solution (Zhou et al., 2020b). A systematic review demonstrated some positive findings for e-therapies in EDs treatment (e.g., Loucas et al., 2014), and results from a Randomized Control Trial (RCT) of Cognitive Behaviour Therapy-Enhanced (CBT-E) for Bulimia Nervosa (BN) delivered via telemedicine compared to faceto-face treatment demonstrate an adequate efficacy (Mitchell et al., 2008).

There is an imperative need to demonstrate how evidence-based therapies, such as Family Based Treatment (FBT) for Eating Disorder, can be successfully delivered over digital platforms (Blumenstyk, 2020; Fernandez-Aranda et al., 2020; Touyz et al., 2020). In the context of the recent COVID-19 pandemic, the wide-spread transition of in-person mental health care to videoconferencing has afforded an opportunity to explore whether and if so, how FBT can be delivered using this modality. Some recent studies showed the possibility to adapt FBT via a videoconferencing platform (TeleHealth FBT) during the COVID-19 pandemic, showing its promising results in the treatment of anorexia nervosa. Similar to in-person care, providers should work in close collaboration with medical providers to ensure the on-going medical safety of patients for outpatient treatment. Frequent communication as to the medical status of patients can help put providers using TeleHealth at ease. The use of remote technology, such as electronic medical records, secure messaging platforms, encrypted emails, or simply phone calls and faxes can facilitate communication among the treatment team.

A recent pilot study conducted in the USA found that FBT e-therapies for body image concerns delivered via telemed-

icine is feasible, acceptable, and had equivalent outcomes to treatment delivered in traditional face-to-face therapy (Anderson et al., 2017; Anderson et al., 2015; Withington et al., 2019). While some people reported that online treatment was found to be lesser than face-to-face treatment on many aspects, the majority of participants felt that this form of therapy demanded a lower commitment and was less anxiety-provoking, which confirms previous suggestions that telehealth interventions might be favored by people with EDs due to feeling less self-conscious about their body and more in control (Simpson et al., 2005). It is however important to note that for some, using video may be upsetting, so a recent paper recommended starting with audio if the patient has concerns about seeing their own image, and/ or asking them to not look at parts of their own image they find distressing, although the therapist and patient should ideally work together to accept switching to video (Waller et al., 2020). Another important aspect concerned the convenience of online treatment which reduced lengthy travel times - currently considered as a barrier to successful treatment (Leavey et al., 2011; Linardon et al., 2020). The positive appraisals around convenience and ease of access, found in a recent study (Fernández-Aranda et al., 2020) were actually identified as advantages of telehealth interventions prior to the COVID-19 (Choi et al., 2014; Langarizadeh et al., 2017; Tuerk et al., 2018) and suggest a future for online treatment beyond the COVID-19 pandemic.

#### Conclusions

Through this article we propose a focus on psychological well-being, in its various forms, and on body image, highlighting the mechanisms that can take into account the effects of the pandemic on EDs. In this article, we have reported numerous studies showing how the pandemic acts by exacerbating dysfunctional health behaviors and significantly reducing levels of psychological well-being. Specifically, EDs-related behaviors appear to be particularly influenced by the changes induced by the COVID-19 (Rodgers et al., 2020). It has proved extremely important to identify groups of people at high risk of developing body image disorders, such as those with pre-existing disorders or a history of EDs, or young people who are more vulnerable to the negative consequences of isolation and more prone to excessive use of appearance-based media.



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The assessment of these factors, even in different cultural contexts, is essential for a better understanding of the impact of the pandemic on EDs risk and recovery. Furthermore, the need to employ distance-based methods to provide ongoing care for EDs due to the COVID-19 pandemic represents a further dramatic and urgent change in treatment. We discussed the different ways the COVID-19 forced therapists and families to rapidly adjust to online modes of treatment delivery. However, the potential benefits that TeleHealth offers in greater access to care for specialized psychological treatments, such as FBT, extend far beyond the current public health crisis.

There is sufficient evidence that e-health interventions may serve as a feasible and effective complement to conventional care and that may ultimately enhance the availability, scalability and accessibility of evidence-based services. This can help telemedicine establish a more permanent place within healthcare settings and service delivery patterns. Therefore, further investigations into the feasibility, acceptability and effectiveness of TeleHealth interventions are needed, as well as a greater understanding of the differences between online and face-to-face treatment in order to ensure that telemedicine is safe, effective and that young people diagnosed with AN can access evidence-based care. Bauer and Moessner (2013) wisely remind the reader that vast differences exist across and within countries in access to healthcare and the modes in which it is delivered. Addressing healthcare inequities, including differences in access to digital technology, remains an important aspiration and social responsibility (Weissman et al., 2020).

Through this contribution, we join the call for international researchers in the field of psychological well-being and body image to collaborate in the production of scientific literature relating to these potential problems and its innovative treatments (Touyz et al., 2020).

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#### REFERENCES

- Ahmed, H. O. (2020). The impact of social distancing and self-isolation in the last corona COVID-19 outbreak on the body weight in Sulaimani governorate-Kurdistan/Iraq, a prospective case series study. *Annals of Medicine and Surgery*, 59, 110-117. <u>https://doi.org/10.1016/j.amsu.2020.09.024</u>.
- Anderson, K. E., Byrne, C. E., Crosby, R. D., & Le Grange, D. (2017). Utilizing telehealth to deliver family-based treatment for adolescent anorexia nervosa. *International Journal of Eating Disorders*, 50(10), 1235-1238. <u>https://doi.org/10.1002/eat.22759</u>.
- Anderson, K. E., Byrne, C., Goodyear, A., Reichel, R., & Le Grange, D. (2015). Telemedicine of family-based treatment for adolescent anorexia nervosa: A protocol of a treatment development study. *Journal of Eating Disorders*, 3(1), 1-7. <u>https://doi.org/10.1186/s40337-015-0063-1</u>.
- Bartholomew, K. J., Ntoumanis, N., Ryan, R. M., Bosch, J. A., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin*, 37(11), 1459-1473. <u>https://doi.org/10.1177/0146167211413125</u>.
- Bauer, S., & Moessner, M. (2013). Harnessing the power of technology for the treatment and prevention of eating disorders. *International Journal of Eating Disorders*, 46(5), 508–515. <u>https://doi.org/10.1002/eat.22109</u>.
- Blumenstyk, G. (2020). Why coronavirus looks like a "black swan" moment for highered. *The Chronicle*. Retrieved from <u>https://www.chronicle.com/newsletter/the-edge/2020-03-11</u>.
- Boswell, R. G., & Kober, H. (2016). Food cue reactivity and craving predict eating and weight gain: a meta-analytic review. *Obesity Reviews*, 17(2), 159-177. <u>https://doi.org/10.1111/obr.12354</u>.
- Boursier, V., Gioia, F., & Griffiths, M. D. (2020). Selfie-engagement on social media: Pathological narcissism, positive expectation, and body objectification–Which is more influential?. *Addictive Behaviors Reports*, 11, 100263. <u>https://doi.org/10.1016/j.abrep.2020.100263</u>.
- Bove, C. F., & Olson, C. M. (2006). Obesity in low-income rural women: qualitative insights about physical activity and eating patterns. *Women & Health*, 44(1), 57-78. <u>https://doi.org/10.1300/J013v44n01\_04</u>.
- Bradburn, N. (1969). The structure of psychological well-being. Chicago: Aldine.
- Brown, Z. & Tiggemann, M. (2016). Attractive celebrity and peer images on Instagram: Effect on women's mood and body image. Body *Image*, 19(4), 37-43. <u>https://doi.org/10.1016/j.bodyim.2016.08.007</u>.



BODYSTUDIESJOURNAL.ORG

- Cai, Q., Chen, F., Wang, T., Luo, F., Liu, X., Wu, Q., ... & Chen, J. (2020). Obesity and COVID-19 severity in a designated hospital in Shenzhen, China. *Diabetes care*, 43(7), 1392-1398. <u>https://doi.org/10.2337/dc20-0576</u>.
- Carriedo, A., Cecchini, J. A., Fernandez-Rio, J., & Méndez-Giménez, A. (2020). COVID-19, psychological well-being and physical activity levels in older adults during the nationwide lockdown in Spain. *The American Journal of Geriatric Psychiatry*, 28(11), 1146-1155. <u>https://doi.org/10.1016/j.jagp.2020.08.007</u>.
- Cellini, N., Canale, N., Mioni, G., & Costa, S. (2020). Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. *Journal of Sleep Research*, e13074. <u>https://doi.org/10.1111/jsr.13074</u>.
- Chen, B., Mouratidis, A., Ryan, R. M., Sheldon, K. M., Soenens, B., Van Petegem, S., et al. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation & Emotion*, 39(2), 216–236. https://doi.org/10.1007/s11031-014-9450-1.
- Choi, N. G., Wilson, N. L., Sirrianni, L., Marinucci, M. L., & Hegel, M. T. (2014). Acceptance of home-based telehealth problem-solving therapy for depressed, low-income homebound older adults: qualitative interviews with the participants and aging-service case managers. *The Gerontologist*, 54(4), 704-713. <u>https://doi.org/10.1093/geront/ gnt083</u>.
- Chouchou, F., Augustini, M., Caderby, T., Caron, N., Turpin, N. A., & Dalleau, G. (2020). The importance of sleep and physical activity on well-being during COVID-19 lockdown: Reunion island as a case study. *Sleep Medicine*, 77, 297-301. <u>https://doi.org/10.1016/j.sleep.2020.09.014</u>
- Clemmensen, C., Petersen, M. B., & Sørensen, T. I. (2020). Will the COVID-19 pandemic worsen the obesity epidemic?. Nature Reviews Endocrinology, 16(9), 469-470. <u>https://doi.org/10.1038/s41574-020-0387-z</u>.
- Cohen, R., Newton-John, T., & Slater, A. (2017). The relationship between Facebook and Instagram appearance-focused activities and body image concerns in young women. *Body Image, 23*(4), 183-187. https://doi.org/10.1016/j.bodyim.2017.10.002.
- Cook-Cottone, C. (2016). Embodied self-regulation and mindful self-care in the prevention of eating disorders. *Eating Disorders*, 24(1), 98–105. <u>https://doi.org/10.1080/10640266.2015.1118954</u>.
- Cooper, M., Reilly, E., Siegel, J., Coniglio, K., Sadeh-Sharvit, S., Pisetsky, E., & Anderson, L. (2020). Eating disorders during the COVID-19 pandemic and quarantine: An overview of risks and recommendations for treatment and early intervention. *Eating Disorders*, 1-23. <u>https://doi.org/10.1080/10640266.2020.1790271</u>.
- Cowen, E. L. (1991). In pursuit of wellness. *American Psychologist*, 46(4), 404-408. <u>https://doi.org/10.1037/0003-066X.46.4.404</u>.
- de Hoog, N., Stroebe, W., & de Wit, J. B. (2008). The processing of fear-arousing communications: How biased processing leads to persuasion. *Social Influence*, 3(2), 84-113. <u>https://doi.org/10.1080/15534510802185836</u>.
- Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268. <u>https://doi.org/10.1207/S15327965PL1104\_01</u>.



- Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: A cross-cultural study of self-determination. *Personality and social psychology bulletin*, 27(8), 930-942. <u>https://doi.org/10.1177/0146167201278002</u>.
- Di Gesto, C., Matera, C., Nerini, A., Policardo, G. R., & Stefanile, C. (2020). Misurare le attività relative alle immagini su Instagram e il confronto relativo all'apparenza: validazione della Instagram Image Activity Scale e della Instagram Appearance Comparison Scale. *Psicologia della Salute*, *3*, 109-128. <u>https://doi.org/10.3280/PDS2020-003005</u>.
- Díaz-García, A., González-Robles, A., Mor, S., Mira, A., Quero, S., García-Palacios, A., ... & Botella, C. (2020).
  Positive and Negative Affect Schedule (PANAS): psychometric properties of the online Spanish version in a clinical sample with emotional disorders. *BMC Psychiatry*, 20(1), 1-13. <u>https://doi.org/10.1186/s12888-020-2472-1</u>.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. https://doi.org/10.1037/0033-2909.95.3.542.
- Diener, E. (2012). New findings and future directions for subjective well-being research. *American Psychologist*,67 (8), 590–597. <u>https://doi.org/10.1037/a0029541</u>.
- Dietz, W., & Santos-Burgoa, C. (2020). Obesity and its Implications for COVID-19 Mortality. *Obesity*, 28(6), 1005-1005. <u>https://doi.org/10.1002/oby.22818</u>.
- Dwyer, M. J., Pasini, M., De Dominicis, S., & Righi, E. (2020). Physical activity: Benefits and challenges during the COVID-19 pandemic. *Scandinavian Journal of Medicine & Science in Sports*, 30(7), 1291-1294. https://doi.org/10.1111/sms.13710.
- Fardouly, J. & Vartanian, L. R. (2015). Negative comparisons about one's appearance mediate the relationship between Facebook usage and body image concerns. *Body Image*, 12(1), 82-88. <u>https://doi.org/10.1016/j.bodyim.2014.10.004</u>.
- Fardouly, J. & Vartanian, L. R. (2016). Social media and body image concerns: Current research and future directions. *Current Opinion in Psychology*, *9*, 1-5. <u>https://doi.org/10.1016/j.copsyc.2015.09.005</u>.
- Fernández-Aranda, F., Casas, M., Claes, L., Bryan, D. C., Favaro, A., Granero, R., ... & Treasure, J. (2020). COVID-19 and implications for eating disorders. *European Eating Disorders Review*, 28(3), 239-245. <u>https://doi.org/10.1002/erv.2738</u>.
- Fisk, M., Livingstone, A., & Pit, S. W. (2020). Telehealth in the context of COVID-19: changing perspectives in Australia, the United Kingdom, and the United States. *Journal of Medical Internet Research*, 22(6), e19264. <u>https://doi.org/10.2196/19264</u>.



**BODYSTUDIESJOURNAL.ORG** Copyright © 2021 Body Studies Journal

- Gremigni, P. (2013). Dal modello biomedico al modello biopsicosociale e oltre. In P. Gremigni & P. E. R. Bitti (Cur.), *Psicologia della salute. Modelli teorici e applicativi* (pp. 35–47). Roma, Italia: Carocci.
- Haghani, M., Bliemer, M. C. J., Goerlandt, F., & Li, J. (2020). The scientific literature on Coronaviruses, COVID- 19 and its associated safety-related research dimensions: A scientometric analysis and scoping review. *Journal of Safety Science*, 129, 104806. <u>https://doi.org/10.1016/j.ssci.2020.104806</u>.
- Haines, J., Kleinman, K. P., Rifas-Shiman, S. L., Field, A. E., & Austin, S. B. (2010). Examination of shared risk and protective factors for overweight and disordered eating among adolescents. Archives of Pediatrics and Adolescent Medicine, 164(4), 336–343.
- Hendrickse, J., Arpan, L. M., Clayton, R. B., & Ridgway, J. L. (2017). Instagram and college women's body image: Investigating the roles of appearance-related comparisons and intrasexual competition. *Computers in Human Behavior*, 74, 92-100. <u>https://doi.org/10.1016/j.chb.2017.04.027</u>.
- Henning, G., Bjälkebring, P., Stenlingx, A., Thorvaldsson, V., Johansson, B., & Lindwall, M. (2019). Changes in within-and between-person associations between basic psychological need satisfaction and well-being after retirement. *Journal of Research in Personality*, 79, 151-160. <u>https://doi.org/10.1016/j.jrp.2019.03.008</u>.
- Heriseanu, A. I., Hay, P., Corbit, L., & Touyz, S. (2017). Grazing in adults with obesity and eating disorders: A systematic review of associated clinical features and meta-analysis of prevalence. *Clinical Psychology Review*, 58, 16–32. <u>https://doi.org/10.1016/j.cpr.2017.09.004</u>.
- Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body Image*, 17(2), 100-110. <u>https://doi.org/10.1016/j.bodyim.2016.02.008</u>.
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., ... Bullmore, E. (2020).
  Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *The Lancet Psychiatry*. <u>https://doi.org/10.1016/S2215-0366(20)30168-1</u>.
- Huang, Y., Yao, L. U., Huang, Y. M., Min, W. A. N. G., Wei, L. I. N. G., Yi, S. U. I., & Hai-Lu, Z. H. A. O. (2020). Obesity in patients with COVID-19: a systematic review and meta-analysis. *Metabolism*, 154378. <u>https://doi.org/10.1016/j.metabol.2020.154378</u>.
- Hussain, A., Mahawar, K., Xia, Z., Yang, W., & Shamsi, E. H. (2020). Obesity and mortality of COVID-19. Meta-analysis. *Obesity research & clinical practice*, 14(4), 295-300. <u>https://doi.org/10.1016/j.orcp.2020.07.002</u>.
- InsideOut Institute for Eating Disorders (2018). Are you at risk?. Retrieved from <u>https://insideoutinstitute.org.au/screener</u>.
- International Health Conference (2002). Constitution of the World Health Organization. 1946. Bulletin of the World Health Organization, 80(12), 983-984. World Health Organization. https://apps.who.int/iris/handle/10665/268688.



- Irvine, M. (2020). 4 Major trends caused by COVID-19 and how to respond. Retrieved from https://www.wordstream.com/blog/ws/2020/03/23/covid-19-business-trends.
- Keyes, C. L. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American psychologist*, *62*(2), 95-108. <u>https://doi.org/10.1037/0003-066X.62.2.95</u>.
- Kim, D., Subramanian, S. V., Gortmaker, S. L., & Kawachi, I. (2006). US state-and county-level social capital in relation to obesity and physical inactivity: a multilevel, multivariable analysis. Social science & medicine, 63(4), 1045-1059. <u>https://doi.org/10.1016/j.socscimed.2006.02.017</u>.
- Langarizadeh, M., Tabatabaei, M. S., Tavakol, K., Naghipour, M., Rostami, A., & Moghbeli, F. (2017). Telemental health care, an effective alternative to conventional mental care: a systematic review. *Acta Informatica Medica*, 25(4), 240-246. <u>https://doi.org/10.5455/aim.2017.25.240-246</u>.
- Leavey, G., Vallianatou, C., Johnson-Sabine, E., Rae, S., & Gunputh, V. (2011). Psychosocial barriers to engagement with an eating disorder service: A qualitative analysis of failure to attend. *Eating Disorders*, 19(5), 425-440. https://doi.org/10.1080/10640266.2011.609096.
- Lee, K., Hoti, K., Hughes, J. D., & Emmerton, L. (2017). Dr Google is here to stay but health care professionals are still valued: an analysis of health care consumers' internet navigation support preferences. *Journal of Medical Internet Research*, 19(6), e210. <u>https://doi.org/10.2196/jmir.7489</u>.
- Lemieux, T., Milligan, K., Schirle, T., & Skuterud, M. (2020). Initial impacts of the COVID-19 pandemic on the Canadian labour market. *Canadian Public Policy*, 46(S1), S55-S65. <u>https://doi.org/10.3138/cpp.2020-049</u>.
- Leonidas, C., & Dos Santos, M. A. (2014). Social support networks and eating disorders: An integrative review of the literature. *Neuropsychiatric Disease and Treatment*, 10, 915–927. <u>https://doi.org/10.2147/NDT.S60735</u>.
- Levine, M. P., & Murnen, S. K. (2009). "Everybody knows that mass media are/are not [pick one] a cause of eating disorders": A critical review of evidence for a causal link between media, negative body image, and disordered eating in females. *Journal of Social and Clinical Psychology*, 28(1), 9-42. <u>https://doi.org/10.1521/jscp.2009.28.1.9</u>.
- Linardon, J., Messer, M., Lee, S., & Rosato, J. (2020). Perspectives of e-health interventions for treating and preventing eating disorders: descriptive study of perceived advantages and barriers, help-seeking intentions, and preferred functionality. Eating and Weight Disorders-Studies on Anorexia, *Bulimia and Obesity*, 1-13. <u>https://doi.org/10.1007/s40519-020-01005-3</u>.
- Linton, M.-J., Dieppe, P., & Medina-Lara, A. (2016). Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. BMJ Open, 6(7), e010641. https://doi.org/10.1136/bmjopen-2015-010641.
- Linville, D., Brown, T., Sturm, K., & McDougal, T. (2012). Eating disorders and social support: Perspectives of recovered individuals. Eating Disorders, 20(3), 216–231. <u>https://doi.org/10.1080/10640266.2012.668480</u>.



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- Liu, D., & Baumeister, R. F. (2016). Social networking online and personality of self-worth: A meta-analysis. *Journal of Research in Personality*, 64, 79-89. <u>https://doi.org/10.1016/j.jrp.2016.06.024</u>.
- Lobera, I. J., Estébanez, S., Fernández, M. S., Bautista, E. \_A., & Garrido, O. (2009). Coping strategies in eating disorders. European Eating Disorders Review: The Professional Journal of the Eating Disorders Association, 17(3), 220–226. <u>https://doi.org/10.1002/erv.920</u>.
- Lombardo, C., Ballesio, A., Gasparrini, G., & Cerolini, S. (2020). Effects of acute and chronic sleep deprivation on eating behaviour. Clinical Psychologist, 24, 64–72. <u>https://doi.org/10.1111/cp.12189</u>.
- Loucas, C. E., Fairburn, C. G., Whittington, C., Pennant, M. E., Stockton, S., & Kendall, T. (2014). E-therapy in the treatment and prevention of eating disorders: A systematic review and meta-analysis. *Behaviour Research and Therapy*, 63, 122-131. <u>https://doi.org/10.1016/j.brat.2014.09.011</u>.
- Lydecker, J. A., & Grilo, C. M. (2019). Food insecurity and bulimia nervosa in the United States. International Journal of Eating Disorders, 52(6), 735-739. <u>https://doi.org/10.1002/eat.23074</u>.
- Mattioli, A. V., Pinti, M., Farinetti, A., & Nasi, M. (2020). Obesity risk during collective quarantine for the COVID-19 epidemic. *Obesity Medicine*, 20, 100263. <u>https://doi.org/10.1016/j.obmed.2020.100263</u>.
- Maugeri, G., Castrogiovanni, P., Battaglia, G., Pippi, R., D'Agata, V., Palma, A., ... & Musumeci, G. (2020). The impact of physical activity on psychological health during Covid-19 pandemic in Italy. Heliyon, 6(6), e04315. <u>https://doi.org/10.1016/j.heliyon.2020.e04315</u>.
- Mayhew, K., & Anand, P. (2020). COVID-19 and the UK Labour Market. Oxford Review of Economic Policy, 36 (Supplement\_1), S215-S224. <u>https://doi.org/10.1093/oxrep/graa017</u>.
- McDowell, I. (2010). Measures of self-perceived well-being. *Journal of Psychosomatic Research*, 69(1), 69-79. https://doi.org/10.1016/j.jpsychores.2009.07.002.
- Mediouni, M., Madiouni, R., & Kaczor-Urbanowicz, K. E. (2020). COVID-19: How the Quarantine could lead to the Depreobesity. Obesity Medicine, 19, 100255. <u>https://doi.org/10.1016/j.obmed.2020.100255</u>.
- Meier, E. P. & Gray, J. (2014). Facebook photo activity associated with body image disturbance in adolescent girls. *Cyberpsychology, Behavior, and Social Networking, 17*(4), 199-206. <u>https://doi.org/10.1089/cyber.2013.0305</u>.
- Mills, J. S., Musto, S., Williams, L., & Tiggemann, M. (2018). "Selfie" harm: Effects on mood and body image in young women. *Body Image*, 27(4), 86-92. <u>https://doi.org/10.1016/j.bodyim.2018.08.007</u>.
- Mingoia, J., Hutchinson, A. D., Wilson, C., & Gleaves, D. H. (2017). The relationship between social networking site use and the internalization of a thin ideal in females: A meta-analytic review. *Frontiers in Psychology*, 8, 1351. https://doi.org/10.3389/fpsyg.2017.01351.



- Mitchell, J. E., Crosby, R. D., Wonderlich, S. A., Crow, S., Lancaster, K., Simonich, H., ... & Myers, T. C. (2008). A randomized trial comparing the efficacy of cognitive–behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. Behaviour Research and Therapy, 46(5), 581-592. <u>https://doi.org/10.1016/j.brat.2008.02.004</u>.
- Mond, J. M., Hay, P. J., Rodgers, B., & Owen, C. (2007). Self-report versus interview assessment of purging in a community sample of women. *European Eating Disorders Review*, 15(6), 403-409. <u>https://doi.org/10.1002/erv.792</u>.
- Mulders-Jones, B., Mitchison, D., Girosi, F., & Hay, P. (2017). Socioeconomic correlates of eating disorder symptoms in an Australian population-based sample. PLoS One, *12*(1), e0170603. <u>https://doi.org/10.1371/journal.pone.0170603</u>.
- Nakeshbandi, M., Maini, R., Daniel, P., Rosengarten, S., Parmar, P., Wilson, C., ... & Joseph, M. A. (2020). The impact of obesity on COVID-19 complications: a retrospective cohort study. *International Journal of Obesity*, 44(9), 1832-1837. <u>https://doi.org/10.1038/s41366-020-0648-x</u>.
- Neubauer, A. B., & Voss, A. (2016). The structure of need fulfillment Separating need satisfaction and dissatisfaction on between- and within-person level. *European Journal of Psychological Assessment*, 34, 220-228. <u>https://doi.org/10.1027/1015-5759/a000326</u>.
- Neufeld, A., Mossière, A., & Malin, G. (2020). Basic psychological needs, more than mindfulness and resilience, relate to medical student stress: A case for shifting the focus of wellness curricula. *Medical Teacher*, 1-12. https://doi.org/10.1080/0142159X.2020.1813876.
- Ng, J. Y., Ntoumanis, N., Thøgersen-Ntoumani, C., Stott, K., & Hindle, L. (2013). Predicting psychological needs and well-being of individuals engaging in weight management: the role of important others. *Applied Psychology: Health and Well-Being*, 5(3), 291-310. <u>10.1111/aphw.12011</u>
- Pakpour, A. H., & Griffiths, M. D. (2020). The fear of COVID-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*, 2(1), 58-63.
- Panchal, N., Kamal, R., Orgera, K., Cox, C., Garfield, R., Hamel, L., & Chidambaram, P. (2020). The implications of COVID-19 for mental health and substance use. *Kaiser Family Foundation*.
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of social and Clinical Psychology*, 23(5), 603-619. <u>https://doi.org/10.1521/jscp.23.5.603.50748</u>.
- Pellegrini, M., Ponzo, V., Rosato, R., Scumaci, E., Goitre, I., Benso, A., ... & Broglio, F. (2020). Changes in weight and nutritional habits in adults with obesity during the "lockdown" period caused by the COVID-19 virus emergency. *Nutrients*, 12(7), 2016. <u>https://doi.org/10.3390/nu12072016</u>.
- Perloff, R. M. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles*, 71(11-12), 363-377. <u>https://doi.org/10.1007/s11199-014-0384-6</u>.



- Perrotta, G. (2020). The concept of altered perception in "body dysmorphic disorder": The subtle border between the abuse of selfies in social networks and cosmetic surgery, between socially accepted dysfunctionality and the pathological condition. *Journal of Neurolology, Neurolological Science and Disorder, 6*(1), 001-007. <u>https://doi.org/10.17352/jnnsd</u>.
- Prilleltensky, I., Dietz, S., Prilleltensky, O., Myers, N. D., Rubenstein, C. L., Jin, Y., & McMahon, A. (2015). Assessing multidimensional well-being: development and validation of the I COPPE scale. *Journal of Community Psychology*, 43(2), 199–226. <u>https://doi.org/10.1002/jcop.21674</u>.
- Reger, M. A., Piccirillo, M. L., & Buchman-Schmitt, J. M. (2020). COVID-19, mental health, and suicide risk among health care workers: Looking beyond the crisis. *The Journal of Clinical Psychiatry*, 81(5).
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, R., & Ryan, R. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26, 419–435. <u>https://doi.org/10.1177/0146167200266002</u>.
- Rodgers, R. F., & Melioli, T. (2016). The relationship between body image concerns, eating disorders and internet use, part I: A review of empirical support. *Adolescent Research Review*, 1(2), 95-119. <u>https://doi.org/10.1007/s40894-015-0016-6</u>.
- Rodgers, R. F., Lombardo, C., Cerolini, S., Franko, D. L., Omori, M., Fuller<sup>®</sup>Tyszkiewicz, M., ... & Guillaume, S. (2020). The impact of the COVID-19 pandemic on eating disorder risk and symptoms. *International Journal of Eating Disorders*, 53, 1166-1170. <u>https://doi.org/10.1002/eat.23318</u>.
- Rogers, C. (1978). The Formative Tendency. Journal of Humanistic Psychology, 18(1), 23-26.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55*(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual review of psychology*, 52(1), 141-166. <u>https://doi.org/10.1146/annurev.psych.52.1.141</u>.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, *57*(6), 1069-1081.
- Saiphoo, A. N., & Vahedi, Z. (2019). A meta-analytic review of the relationship between social media use and body image disturbance. *Computers in Human Behavior*, 101, 259-275. <u>https://doi.org/10.1016/j.chb.2019.07.028</u>.
- Seekis, V., Bradley, G. L., & Duffy, A. L. (2020). Appearance-Related Social Networking Sites and Body Image in Young Women: Testing an Objectification-Social Comparison Model. *Psychology of Women Quarterly*, 0361684320920826. 10.1177/0361684320920826.

Seligman, M. E. (2002). Positive psychology, positive prevention, and positive therapy. Handbook of positive psychology, 2, 3-12.



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- Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.
- Sherlock, M., & Wagstaff, D. L. (2019). Exploring the relationship between frequency of Instagram use, exposure to idealized images, and psychological well-being in women. *Psychology of Popular Media Culture*, 8(4), 482-490. https://doi.org/10.1037/ppm0000182.
- Shine, D., & Johnson, D. (1978). Avowed happiness as an overall assessment of the quality of life. Social Indicators Research, 5(1), 475–492. <u>https://doi.org/10.1007/BF00352944</u>
- Simpson, S., Bell, L., Knox, J., & Mitchell, D. (2005). Therapy via videoconferencing: A route to client empowerment?. *Clinical Psychology & Psychotherapy*, 12(2), 156-165. <u>https://doi.org/10.1002/cpp.436</u>
- Slade, P. D. (1994). What is body image?. Behaviour Research and Therapy, 32(5), 497–502. <u>https://doi.org/10.1016/0005-7967(94)90136-8</u>.
- Statista (2020). Instagram dossier. www.statista.com/study/21392/instagram-statista-dossier/.
- Stice. E., & Shaw, H. E. (2002). Role of body dissatisfaction in the onset and maintenance of eating pathology: A synthesis of research findings. *Journal of Psychosomatic Research*, 53(5), 985-993. <u>https://doi.org/10.1016/S0022-3999(02)00488-9</u>.
- Sun, Q. (2020). Selfie Editing and Consideration of Cosmetic Surgery Among Young Chinese Women: The Role of Self-Objectification and Facial Dissatisfaction. *Sex Roles*, 1-10. 10.1007/s11199-020-01191-5.
- Swami, V., Horne, G., & Furnham, A. (2021). COVID-19-related stress and anxiety are associated with negative body image in adults from the United Kingdom. *Personality and Individual Differences*, 170, 110426. <u>https://doi.org/10.1016/j.paid.2020.110426</u>.
- Thevarajan, I., Buising, K. L., & Cowie, B. C. (2020). Clinical presentation and management of COVID-19. *Medical Journal of Australia*, 213(3), 134-139. <u>https://doi.org/10.5694/mja2.50698</u>.
- Thomas, E. V., & Warren-Findlow, J. (2020). Body image, self-esteem, and behavioral risk for chronic disease among college students: Additional evidence for integrated prevention. *Journal of American College Health*, 68(6), 658-665. <u>https://doi.org/10.1080/07448481.2019.1590370</u>.
- Thornton, J. (2020). COVID-19: A&E visits in England fall by 25% in week afterlockdown. *BMJ*, 369:m1401. https://doi.org/10.1136/bmj.m1401.
- Torales, J., O'Higgins, M., Castaldelli-Maia, J. M., & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*, 66(4), 317-320. <u>https://doi.org/10.1177/0020764020915212</u>.



**BODYSTUDIESJOURNAL.ORG** Copyright © 2021 Body Studies Journal Cabrini University • ISSN-2642-9772

- Touyz, S., Lacey, H., & Hay, P. (2020). Eating disorders in the time of COVID-19. *Journal of Eating Disorders*, 8, 19. https://doi.org/10.1186/s40337-020-00295-3.
- Tuerk, P. W., Keller, S. M., & Acierno, R. (2018). Treatment for anxiety and depression via clinical video conferencing: evidence base and barriers to expanded access in practice. Focus, 16(4), 363-369. <u>https://doi.org/10.1176/appi.focus.20180027</u>.
- Tylka, T. L., & Wood-Barcalow, N. L. (2015). The Body Appreciation Scale-2: item refinement and psychometric evaluation. *Body Image*, 12(1), 53-67. <u>https://doi.org/10.1016/j.bodyim.2014.09.006</u>.
- van der Eijk, M., Nijhuis, F. A., Faber, M. J., & Bloem, B. R. (2013). Moving from physician-centered care towards patient-centered care for Parkinson's disease patients. *Parkinsonism & Related Disorders*, 19(11), 923-927. https://doi.org/10.1016/j.parkreldis.2013.04.022.
- Verstuyf, J., Vansteenkiste, M., Soenens, B., Boone, L., & Mouratidis, A. (2013). Daily ups and downs in women's binge eating symptoms: The role of basic psychological needs, general self-control, and emotional eating. *Journal of Social and Clinical Psychology*, *32*(3), 335-361. <u>https://doi.org/10.1521/jscp.2013.32.3.335</u>.
- Waller, G., Pugh, M., Mulkens, S., Moore, E., Mountford, V. A., Carter, J., ... & Smit, V. (2020). Cognitive-behavioral therapy in the time of coronavirus: Clinician tips for working with eating disorders via telehealth when face-to-face meetings are not possible. *International Journal of Eating Disorders*, 53(7), 1132-1141. <u>https://doi.org/10.1002/eat.23289</u>.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. International Journal of Environmental Research and Public Health, 17(5), 1729-. <u>https://doi.org/10.3390/ijerph17051729</u>.
- Weissman, R. S., Bauer, S., & Thomas, J. J. (2020). Access to evidencebased care for eating disorders during the COVID-19 crisis. *International Journal of Eating Disorders*, 53, 369–376. <u>https://doi.org/10.1002/eat.23279</u>.
- Whoqol Group. (1995). The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. *Social science & medicine*, 41(10), 1403-1409. 10.1016/0277-9536(95)00112-K.
- Withington, T. (2019). Family Based Treatment for Anorexia Nervosa (FBT-AN) Telehealth Pilot: Outcomes. In The 17th Annual Conference of the Australia & New Zealand Academy for Eating Disorders Adelaide, South Australia.
- Woods, H. C., & Scott, H. (2016). # Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, *51*, 41-49. <u>https://doi.org/10.1016/j.adolescence.2016.05.008</u>.



- World Health Organization (2020). Stay physically active during self-quarantine. <u>https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publica-</u> <u>tions-and-technical-guidance/noncommunicable-diseases/stay-physically-active-during-self-quaran-</u> <u>tine#:~:text=Even%20in%20small%20spaces%2C%20walking,meter%20distance%20from%20other%20</u> <u>people</u>.
- Wright, R. (2020). How loneliness from coronavirus isolation takes its own toll. The New Yorker. March, 23.
- Zachary, Z., Brianna, F., Brianna, L., Garrett, P., Jade, W., Alyssa, D., & Mikayla, K. (2020). Self-quarantine and weight gain related risk factors during the COVID-19 pandemic. *Obesity Research & Clinical Practice*, 14(3), 210-216. <u>https://doi.org/10.1016/j.orcp.2020.05.004</u>.
- Zhou, J., Huebner, E. S., & Tian, L. (2020a) The reciprocal relations among basic psychological need satisfaction at school, positivity and academic achievement in Chinese early adolescents. *Learning and Instruction*, 71, 101370. <u>https://doi.org/10.1016/j.learninstruc.2020.101370</u>.
- Zhou, X., Snoswell, C. L., Harding, L. E., Bambling, M., Edirippulige, S., Bai, X., & Smith, A. C. (2020b). The role of telehealth in reducing the mental health burden from COVID-19. *Telemedicine and e-Health*, 26(4), 377-379. <u>https://doi.org/10.1089/tmj.2020.0068</u>.

