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# Optimism and Its Impact on Mental and Physical Well-Being

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**Abstract:** Many studies have been carried out about the effectiveness of optimism as a psychological phenomenon, leading to various theoretical formulations of the same concept, conceptualized as "disposition", "attributional style", "cognitive bias", or "shared illusion". This overview is an attempt to explore the "optimism" concept and its relations with mental health, physical health, coping, quality of life and adaptation of purpose, health lifestyle and risk perception.

Positive and negative expectations regarding the future are important for understanding the vulnerability to mental disorders, in particular mood and anxiety disorders, as well as to physical illness. A significant positive relation emerges between optimism and coping strategies focused on social support and emphasis on positive aspects of stressful situations. Through employment of specific coping strategies, optimism exerts an indirect influence also on the quality of life. There is evidence that optimistic people present a higher quality of life compared to those with low levels of optimism or even pessimists. Optimism may significantly influence mental and physical well-being by the promotion of a healthy lifestyle as well as by adaptive behaviours and cognitive responses, associated with greater flexibility, problem-solving capacity and a more efficient elaboration of negative information.

**Keywords:** Optimism, Mental health, Physical health, Coping, Quality of life, Adaptation of purpose, Health lifestyle, Risk perception.

## INTRODUCTION

As it is commonly understood, the term 'optimism' embraces two closely correlated concepts: the first is the inclination to hope, while the second more generally refers to the tendency to believe that we live in *"the best of all possible worlds",* as coined by the German philosopher Gottfried Wilhelm Leibniz in his famous theodicy, ridiculed in Voltaire's *Candide*.

Over the last few years, a significant body of research has been carried out about the effectiveness of optimism as a psychological phenomenon, leading to various theoretical formulations of the same concept, understood as "disposition", "attributional style", "cognitive bias", or "shared illusion".

Scheier and Carver [1] theorized the "disposition" towards optimism in their studies, called "dispositional optimism", considering it a trait of an equilibrated personality, in time and in various situations, that influences the way in which individuals come to terms with present, past and future events in life. Optimistic individuals are positive about events in daily life. In the research carried out regarding this perspective, positive correlations have been found between optimism and physical/mental well-being. Optimistic subjects tend to have more frequently protective attitudes, are more resilient to stress and are inclined to use more appropriate coping strategies.

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In open contrast, studies carried out by Peterson and Seligman [2], that were prevalently directed towards the understanding of the psychological bases of pessimism, lead to conception of its opposite, optimism, as an "attributional style", characterized by the tendency to believe that negative events are inconstant (the negative event will not repeat itself), external (I am not responsible for the event) and specific (the event is "specific", self-limiting and will not influence any other activities of mine and my life). Optimists believe that positive events are more stable and frequent than negative ones. They think that they can avoid problems in daily life and prevent them from happening, and therefore they cope with stressful situations more successfully than pessimists [3, 4].

Referring to the viewpoint of *Social Cognition*, a third perspective sustains that optimism is the consequence of a cognitive underestimation of risk, in other words, a "bias" for the Self. This bias reflects the optimist's conviction that positive events are more likely to occur to him/herself while negative events prevalently affect others. Weinstein [5, 6] defined this phenomenon "unrealistic optimism". The optimistic bias is not a personality trait like dispositional optimism [1] but rather a systematic cognitive distortion of the consideration of one's own probability of encountering negative events. The optimistic bias has been defined as the result of the joint efforts of two mechanisms. The first of these is related to cognitive factors such as lack of information and poor critical insight of one's own cognitive skills. The second mechanism has a motivational nature, closely tied to defending one's self-esteem and to defensive negation.

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This overiew is an attempt to explore optimism concept and its relations with mental health, physical health, coping, quality of life and adaptation of purpose, health lifestyle and risk perception.

## OPTIMISM AND MENTAL HEALTH

Positive and negative expectations regarding the future are important for understanding the vulnerability to mental disorders, in particular mood disorders. Recent studies have found an inverse correlation between optimism and depressive symptoms [7, 8], and also between optimism and suicidal ideation [9]. As such, optimism seems to have an important moderating role in the association between feelings of loss of hope and suicidal ideation [10]. In relation to this, Van der Velden *et al.* [11] have recently studied the association between 'dispositional optimism' and depression in victims of a natural disaster. The results of this research show that compared to optimists, pessimists nurtured little hope for the future and were more at risk for depressive and anxiety disorders, with subsequent impairment of social functioning and quality of life. The role of optimism in the quality of life has also been investigated in depressive disorders emerging in patients suffering from somatic pathologies, (such as acute coronary syndrome, for instance) in which a significant inverse correlation was found between dispositional optimism and level of satisfaction in life on one hand and depressive symptoms emerging after the cardiovascular event on the other hand [12].

Giltay *et al.* [13] raised the question of using psychotherapy to promote an optimistic disposition in pessimistic subjects, thus developing an efficient strategy to fight depression. Evidence regarding this subject has emerged also from studies carried out on victims of catastrophic events such as natural disasters. In fact, it has been observed that even one single session of cognitive-behavioural therapy, targeted at enhancing the sense of control and coping with incapacitating disturbances that ensue after a natural disaster, may contribute to improving the well-being of the individual [14]. A brief intervention of this type, focused on recuperating an active coping strategy and regaining control, may be significant for 'pessimistic' victims, considering that they are more inclined to avoid problems and "give up", instead of trying to regain control of their lives [13].

## OPTIMISM AND PHYSICAL HEALTH

Despite the small number of studies published on this matter, the relation between physical health and optimism is as important as that between optimism and mental health described above. Many studies have found that optimism is correlated with better physical well-being compared to pessimism. Moreover, in contrast with optimism, pessimism is correlated with excessive somatic complaints [15]. In a study on a population of elderly subjects of both sexes, aged between 65-85 years, Giltay *et al.* [16] noted that dispositional optimism predicted less probability of mortality in general and of cardiovascular mortality in particular. These data have been confirmed in a subsequent longitudinal study on a population of males aged between 64 - 84 years in which an inverse correlation was reported between dispositional optimism and the risk of cardiovascular death [13]. Matthews *et al.* [17] observed that in the three years following the menopause, carotid atherosclerosis tended to progress more slowly in optimistic women compared to their pessimistic peers. In reference to oncological patients, Schulz *et al.* [18] noted that high scores on the pessimism items of the LOT (a measure of dispositional optimism) [1] significantly predicted premature death in young patients with breast cancer. Among patients with neck or head cancer, optimists manifested significantly greater survival a year after diagnosis when compared to pessimists [19]. In a recent study, Ironson *et al.* [20] showed how dispositional optimism, less avoidant coping strategies and lower level of depression positively influence progression of the illness in patients suffering from AIDS.

Although optimism is commonly believed to be a protective factor with regard to well-being and physical and psychical health [1] some research has suggested that this is not always the case. Schofield *et al.* [21] found that optimism did not predict lower mortality rates among lung cancer patients. Also studies concerning the immune system turned out contrasting results. Tomakowsky *et al.* [22] investigated the correlation between the "dispositional" optimism [1] and the "attributional" optimism [2, 4] mentioned earlier, with the clinical and immune condition of subject affected with AIDS. The results of their research indicated that both types of optimism were associated with an improvement of the symptomatology of AIDS. Nevertheless, in the long term, high levels of optimism, in particular, of the attributional type, were associated with a significant impairment of the immune defence system. Milam *et al.* [23], on the other hand, found that high levels of optimism do not confer any clinical improvement to AIDS patients, although moderate levels were found to be associated with more efficacious immune systems. Segerstrom [24, 25] examined two hypotheses that may explain these results: the disappointment hypothesis, according to which persistent and uncontrollable stressors reduce the positive expectations that are typical of optimists and thus consequently control over the stress factors, leading to decrease in immune defence. The other is the engagement hypothesis theorizing that more optimistic individuals are more easily drawn to trying to resolve a problem while pessimists tend to let the matter drop, thus ending up more exposed to stress. As such, in cases of severe illnesses like AIDS, when associated with the elevated levels of cortisol and adrenalin that typically present when faced with stress, optimism may actually determine a decrease in the defence mechanisms of the immune system.

## OPTIMISM AND COPING

Coping refers to those mechanisms and mental processes enacted by the individual as an adaptive response to reduce the stress deriving from a threatening situation, as defined by Lazarus and Opton [26].

From the early studies of Scheier *et al.* [27], a significant positive relation emerged between optimism and different aspects of life, such as coping strategies focalized on the problem, looking for social support and emphasis of the positive aspects of the stressful situation.

Despite a certain amount of dissent, other researchers confirmed the first results. Dispositional optimism was found to be positively correlated with those coping strategies ide-

ated to eliminate, reduce or manage the stressors and negatively correlated with those employed to ignore, avoid or distance oneself from stressors and emotions [28]. Moreover, the choice of the coping strategy shows to be constant over the course of time [29]. Low levels of dispositional optimism were observed in students who were particularly vulnerable to the normal difficulties encountered in scholastic environments and who developed intolerance or even hostility towards the school [30]. Also in the work environment a positive association was observed between optimism and performance, mediated by the positive influence that optimism has on coping strategies [31]. Many studies have confirmed that optimists tend to use coping strategies that focalize on the problem more frequently compared to pessimists. When these strategies cannot be enacted, optimists resort to adaptive strategies that focalize on the emotions, for example, acceptance, humour and positive re-assessment of the situation [27, 32-34].

Through employment of specific coping strategies, optimism exerts an indirect influence also on the quality of life. In a sample of women with breast cancer Schou *et al.* [35] found that optimistic women presented coping strategies characterized by acceptance of the situation, emphasis of the positive aspects and attempts to alleviate their condition with a sense of humour, showing evident positive results on their quality of life. In contrast, the pessimistic women reacted with sentiments of impotence and loss of hope which significantly worsened their quality of life.

## OPTIMISM, QUALITY of LIFE AND ADAPTATION OF PURPOSE

Quality of life refers to life conditions of an individual (health, wealth, social conditions) and satisfaction of personal desires, measured on a scale of personal values [36]. As such, we are dealing with a multidimensional construct that integrates objective and subjective indicators, a wide range of varying contexts of life and individual values.

Wrosch and Scheier [34] evidenced two variables capable of influencing quality of life: optimism and adaptation of purpose. Both in fact exert a fundamental role in adaptive management of critical circumstances in life and of goals to reach. There is evidence that optimistic people present a higher quality of life compared to those with low levels of optimism or even pessimists [37, 38]. It has been demonstrated that in the presence of severe pathological conditions, optimistic patients adapt better to stressful situations compared to pessimists, with positive repercussions on their quality of life. For example, in a sample of patients who underwent an aortic-coronary bypass, optimism was significantly and positively associated with quality of life in the six months following the operation [39]. The optimistic patients in fact presented a more rapid clinical improvement during the period of hospitalization and a quicker return to daily routine after discharge from hospital. Analogous results are reported in samples of patients with other pathologies. In patients affected with epilepsy, Pais-Ribeiro *et al.* [40] found that optimists showed an improved perception of their physical and mental state of health and reported higher quality of life compared to pessimists. Kung *et al.* [41] examined the relation between optimism-pessimism and quality of life in patients with cancer of the neck, head or thyroid. In all the subjects, optimism was associated with better quality of life in both the scales of the physical and mental components of the MMPI (*Minnesota Multiphasic Personality Inventory*) [42], in six of the eight subscales of the SF-12 (*12-item Short Form Health Survey)* [43] and of the SF-36 (36-*item Short Form Health Survey)* [44].

Lastly, in women with breast cancer, optimism was associated with better quality of life in terms of emotional, functional and socio-familial well-being [45].

Many studies have outlined the importance on quality of life of an individual's capacity to adapt and modify his/her own objectives according to different situations [32, 34]. It is possible to avoid or reduce the negative psychological and physical repercussions consequent to the non-achievement of a goal (for example, becoming ill despite constant efforts to stay healthy) through a process of adaptive self-regulation targeted at disengaging oneself from an unrealizable goal and concentrating efforts instead on more attainable objectives. In fact this form of release from a commitment is adaptive because it averts the patient from the emotionally negative consequences of repeated failures, while re-directing the objectives gives back meaning and a sense of purpose to life. Individuals who succeed in this present better quality of life and better physical health compared to those who have greater difficulty in renouncing their unattainable goals. Moreover, they are more optimistic towards their future because they are able to manage difficulties more efficiently as well as to identify new aims in life.

## OPTIMISM, HEALTH LIFESTYLE AND RISK PERCEPTION

One way in which optimism may significantly influence physical well-being is through promotion of a healthy lifestyle. In fact, it is thought that optimism facilitates adaptive behaviours and cognitive responses that consent negative information to be elaborated more efficiently and that are associated with greater flexibility and problem-solving capacity [3]. These coping strategies are in turn predictive of behaviours targeted at avoiding, and if necessary facing positively, health problems [46, 47].

Several studies have analysed the correlations between optimism and healthy behaviours. In particular Steptoe *et al.* [48] in a sample of males and females aged between 65 – 80 years found that optimism was correlated with healthy behaviours such as abstaining from smoking, moderate consumption of alcohol, the habit of walking briskly and regular physical activity, regardless of demographical factors, current psycho-physical conditions and body mass.

A recent cohort study which examined 545 males aged between 64 – 84 for fifteen years revealed a significant inverse relation between dispositional optimism and death for cardio-vascular diseases, with a reduction of 50% of the risk of cardio-vascular death in the optimistic individuals [49].

Numerous researches have investigated the relation between risk perception and unrealistic optimism that leads to involvement in risky situations. Unrealistically optimistic subjects tend to perceive themselves as being less at risk compared to pessimists, as far as questions of health are concerned, and furthermore believe themselves more capable of

preventing such problems from happening [4]. For example, comparing groups of students with a marked disposition towards risky behaviour and students having a low tendency to get involved in such behaviour, Todesco and Hillman [50] found that both groups assessed the possibility of damaging consequences of a given situation, but the first group was at variance for the fact that these students perceived themselves as invulnerable.

Smokers represent an important field in the study of the relation between unrealistic optimism and perception of risk for the health. These subjects consider themselves to be less at risk than others for developing illnesses associated with smoking which has been interpreted as a form of irrationality or rather, as an expression of optimistic bias. McKenna *et al.* [51] illustrated that smokers, while considering themselves to have a greater risk of contracting pathologies linked to smoking compared to non-smokers, nonetheless perceived such a risk as inferior when compared to the average number of smokers (optimistic bias). More recent studies have indicated that smokers have a significantly lower perception of risk in comparison with non-smokers [52]. By way of confirmation of these data, it was observed that smokers with unrealistic optimism (that is, those who perceived their own risk as lower than the effective risk) tended to believe that smoking only for a few years they would not incur any risk of lung cancer and that developing lung cancer depends solely on genetic predisposition [53].

Furthermore, unrealistic optimists barely considered the hypothesis of giving up smoking in order to reduce the risk of cancer.

## CONCLUSIONS

Optimism is a tendency to expect good things in the future. From the literature here reviewed, it is apparent that optimism is a mental attitude that heavily influences physical and mental health, as well as coping with everyday social and working life. Through an adaptive management of personal goals and development and by using active coping tactics, optimists are significantly more successful than pessimists in aversive events and when important life-goals are impaired.

Clinics should develop an application form of optimism concept in Applied Psychology and in Psychotherapy. As a matter of fact, application form of optimism concept should be integrated in treatments and prevention programs respectively in mental and physical health, to improve well-being.

## AUTHORS' CONTRIBUTIONS

The authors conceived the manuscript and drafted it. All authors read and approved the final manuscript.

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