



Understanding the coping process from a self-determination theory perspective

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Purpose. To explore conceptual links between the cognitive-motivational-relational theory (CMRT) of coping (Lazarus, 1991) and self-determination theory (SDT) of motivation (Deci & Ryan, 1985).

Method. We present a very brief overview of the two theories. We also discuss how components from the two theories can be examined together to facilitate research in the health/exercise domain. To this effect, we offer a preliminary integrated model of stress, coping, and motivation, based on the two aforementioned theories, in an attempt to illustrate and instigate research on how motivational factors are implicated in the coping process.

Conclusion. We believe that the proposed model can serve as a platform for generating new research ideas which, besides their theoretical relevance, may have important applied implications.

How the person copes depends not only on the coping possibilities and how they are appraised but also on what a person wants to accomplish in the encounter. . . the study of coping should never be divorced from motivation (Lazarus, 1991, p. 115).

Over the last 40 years a prodigious number of journal articles have been published which explore the psychological processes that underpin coping processes and resultant health outcomes. The impetus for this research can be attributed to the publication of a seminal book, entitled 'Psychological stress and the coping process', by Richard Lazarus in 1966. Embedded within the 'cognitive revolution' that swept psychology at the time, Lazarus' work highlighted the role of cognitive appraisals in determining one's reaction to a stressful encounter. In subsequent years (e.g. Lazarus, 1991), Lazarus proposed the cognitive-motivational-relational theory (CMRT) of coping, which highlights the role of distinct positive and negative emotions in the stress

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appraisal process (see also Lazarus, 1999). Essentially, the CMRT links emotion with motivation by arguing that emotions are reactions to the fate of active goal pursuit. Lazarus (1991) viewed that when one is committed to the pursuit of important goals, one will experience positive emotions from appraisals of smooth goal progress or goal attainment, and negative emotions from appraisals of goal thwarting or delays. As the opening quote exemplifies, Lazarus repeatedly emphasized in his writings that the concept of motivation is essential for a proper understanding of cognitive appraisals and coping responses in troubled person–environment relationships.

Although we agree with the central role of motivation in the CMRT, we believe that discussing motivation only in terms of progress or obstacles in the goal striving process is a quite restrictive perspective. A more comprehensive understanding of the motivational processes involved in the coping process necessitates the examination of personal factors concerned with issues of volition, choice, and self-determination in goal striving, as well as the investigation of the role of socio-contextual features in supporting or undermining such goal undertakings. To this end, self-determination theory (SDT; Deci & Ryan, 1985, 2002) can be useful in demonstrating the role of volition and self-determination in the coping process. SDT is a macro-theory of human motivation that has received considerable attention in various life domains. It argues that the type of motivation underpinning behaviour can have a significant impact on physical, psychological, and emotional functioning. The purpose of this paper is to present a very brief overview of the CMRT and SDT and discuss how components from the two theories can be integrated. To this effect, we present a preliminary integrative model. Although various other theories and models of coping and motivation exist, a discussion of those is beyond the scope of this article. We believe that the CMRT and SDT can illustrate well how motivational factors are implicated in the coping process.

Cognitive-motivational-relational theory of coping

Lazarus (1991) and Folkman (1984) viewed stress not as a stimulus or a response, but as a person–environment relationship that is perceived as taxing or exceeding a person's resources. When faced with a stressful situation, a person will evaluate its potential personal relevance and significance in terms of its impact on valued personal goals. This process is known as primary appraisal. Lazarus and Folkman (1984) distinguished among different types of primary appraisal: harm/loss; threat; challenge; and benign. Harm/loss appraisals refer to an injury or damage that has already been done, such as being diagnosed with a terminal illness. Threat appraisals refer to a potential for harm or loss, fairly typical before health screening tests for example. Challenge appraisals refer to an opportunity for personal growth or mastery, for example being involved in a weight loss programme exercise programme. When a source of stress (stressor) is perceived as benign, no further appraisal or action is undertaken. Harm and threat appraisals are associated with negative emotional reactions, whereas challenge appraisals are linked to more pleasant emotions. Many factors have been identified as determinants of each of these appraisals, including generalized beliefs about control, goal commitment, and the novelty of the stressor (Folkman, 1984). Folkman emphasized that the three appraisals are not independent and can occur simultaneously to a different extent during a stressful event. In addition to primary appraisals, Lazarus and Folkman (1984) also identified a secondary appraisal process. When a stressor is perceived as relevant and significant, an individual will evaluate the controllability of the stressor and his/her resources and options. Therefore, secondary appraisals involve situational appraisals of control.

Different stress appraisals can lead to different coping responses. Lazarus (1993) defined coping as the cognitive and behavioural efforts employed by an individual to deal with the demands that are created by the stressful person–environment transaction. A large number of coping strategies have been proposed and measured in the literature. Researchers have attempted to reduce these strategies into a smaller meaningful number of dimensions using a diverse array of classification systems. From Lazarus and Folkman's (1984) perspective, there are two main types of coping strategies: those aimed at resolving the stressful encounter (problem-focused) and those utilized to regulate the unpleasant emotions that arise during the encounter (emotion-focused). Examples of problem-focused coping strategies are planning, increasing effort and management of priorities. Examples of emotion-focused coping strategies are distancing, isolation, and wishful thinking. Problem- and emotion-focused strategies can be employed to a different extent in the same troubled person–environment relationship.

Lazarus and Folkman (1984) emphasized that some coping strategies are not inherently better than others; in fact, effective coping requires a fit between situational appraisals and choice of coping responses (this notion is also known as the goodness of fit model). Specifically, perceptions of controllability of the situation should lead to the utilization of problem-focused strategies to a greater degree than emotion-focused strategies, which are more suitable for situations which are less controllable. However, Lazarus (1991) emphasized that coping is a dynamic process with substantial intra-individual and inter-individual variability; individuals might have to utilize different coping strategies at different stages of the same stressful encounter or from one stressful encounter to another (e.g. see Folkman & Lazarus, 1985). Also, coping strategies that are effective for one individual might not be effective for another person in the same encounter. Nevertheless, Lazarus (1993) acknowledged that some coping strategies are more stable than others, although he did not subscribe to the trait approach on coping (e.g. Endler & Parker, 1990; Krohne, 1996). The latter approach views that individuals have a preferred coping repertoire (i.e. coping styles) which they employ across different situations and which are determined to a large extent by personality variables (e.g. optimism, extraversion).

Coping efforts can result in a variety of health-related, affective and behavioural outcomes. A review of the extant literature in the health domain is beyond the scope of this paper. However, for illustrative purposes we offer some examples. Successful coping has been related to better quality of life, mental health, and illness remission (Aldwin, 2000). Coping efforts might also result in positive adjustment to stressors such as adaptation to illness (e.g. Holland & Holahan, 2003), caregiving responsibilities (e.g. Kneebone & Martin, 2003), and body image concerns (e.g. Sabiston, Sedgwick, Crocker, Kowalski, & Mack, 2007). Lazarus (1993) emphasized that there are no universally appropriate or inappropriate coping strategies, although some coping strategies are more often better or worse than others. For instance, a 'wait and see approach' (e.g. in the form of distancing, rationalization) following a first abnormal cervical smear might be more effective for psychological health (e.g. see Orbell, Hagger, Brown, & Tidy, 2004) as opposed to mobilizing effort and designing plans of action. However, failing to mobilize when facing with a confirmed and imminent threat can have disastrous consequences for physical and psychological health. As an outcome of successful coping, individuals might reappraise a stressful encounter as less threatening and alleviate the intensity of their negative emotions. Further, successful goal attainment due to appropriate coping actions can result in a variety of positive emotions. Thus, in the CMRT of coping, emotions are considered as both antecedents (alongside stress appraisals) and outcomes of coping efforts.

Self-determination theory

SDT (Deci & Ryan, 1985, 2002) is a macro-theory of motivation (comprising of four mini-theories) that examines the degree to which human behaviours are autonomous or self-determined, as well as the personal and contextual factors that determine personal self-determination. SDT uses an organismic perspective by arguing that individuals are active organisms that seek challenges in their environment in an attempt to achieve personal growth and development. SDT also employs a dialectic perspective by proposing that social contextual factors can facilitate or undermine individuals' attempts for personal development. Thus, similar to the CMRT of coping, SDT proposes a dynamic person–environment relationship that impacts upon subsequent behaviour, emotion, and cognition.

The concept of psychological needs provides the basis for examining this dialectic perspective (Deci & Ryan, 2002). SDT proposes three fundamental and universal human needs, the satisfaction of which is essential for individuals' efforts for personal growth and development. These are the needs for autonomy, competence, and relatedness. All three psychological needs are essential, but the degree to which they are satisfied varies from one context to another. Autonomy reflects a desire to engage in activities of one's choosing and to be the origin of one's own behaviour. Competence refers to individuals' need to interact effectively with their environment and to experience a sense of effectance in producing desired outcomes and preventing undesired events. Finally, relatedness is the need to feel connected to and accepted by others in a social milieu. Using participation in an organized exercise programme as an example (e.g. see Edmunds, Ntoumanis, & Duda, 2008), individuals usually seek to engage in exercise activities that foster most or all their psychological needs, in other words, activities that reflect personal choice, provide individuals with opportunities for task accomplishment, and facilitate meaningful interpersonal interactions with other exercisers.

The social environment within which an individual operates is proposed to influence the extent to which his/her psychological needs are satisfied. Psychological need satisfaction can be promoted or thwarted by different facets of the social environment. Three main adaptive facets of the social environment have been identified in the SDT literature. The first is autonomy support, which refers to the provision of choice and meaningful rationale from those in a position of authority (e.g. fitness instructors), acknowledgement of the perspective of those they interact with, and minimization of pressure (Deci, Eghrari, Patrick, & Leone, 1994). A second adaptive facet of the environment is called structure and refers to whether those in a position of authority provide clear expectations, optimal challenges, and constructive feedback (Reeve, 2002). A third adaptive facet of the social environment identified in the SDT literature is called interpersonal involvement, and refers to the willingness of those in a position of authority to dedicate psychological resources, such as time, energy, and affection, to those they interact with (Deci & Ryan, 1991). However, the social environment can also be maladaptive. Specifically, SDT argues that social contexts can be controlling by being coercive and by using monitoring, surveillance, and task-contingent rewards.

According to SDT, when the social environment facilitates psychological need satisfaction, behaviour is usually self-determined and psychological well-being is experienced (e.g. see Vallerand, 1997). In contrast, when the social environment undermines the three psychological needs, behaviour often has low or no self-determination and ill-being is reported. Deci and Ryan (1985, 2002) view motivation from a multidimensional perspective and have identified three general facets of motivation: intrinsic motivation; extrinsic motivation (which is itself multidimensional

in nature); and amotivation. These types of motivation vary along a self-determination continuum. Intrinsic motivation, the most self-determined type of motivation, involves partaking in an activity for enjoyment, learning, or task accomplishment reasons. Extrinsic motivation reflects behaviours which are undertaken not because they are interesting but because they result in important outcomes. Extrinsic motivation is comprised of four different regulatory types that differ in their degree of self-determination. *Integrated regulation* is the most self-determined type of extrinsic motivation and reflects behaviours that are undertaken because they reflect values and beliefs that have been fully internalized and integrated within one's values system and sense of self (e.g. 'being an exerciser is a big part of who I am'). *Identified regulation* refers to task engagement because of the valued benefits of a particular behaviour (e.g. 'I exercise to improve my health'). *Introjected regulation* refers to behaviours performed to avoid negative emotions (e.g. guilt) or to support conditional self-worth (e.g. 'I exercise to look good'). The fourth type of extrinsic motivation is *external regulation*, which is the least self-determined type of extrinsic motivation, and reflects behaviours performed due to external pressure (e.g. 'I exercise because I've been told so by my doctor'), to avoid punishment or to obtain rewards. Lastly, amotivation is defined as the absence of intention to act due to lack of contingency, perceived value, or competence. Deci and Ryan (1985) argued that individuals' regulation can be found at any place in the continuum and can vary in different situations or contexts. However, these authors also identified three personal dispositions (labelled 'causality orientations') which predispose individuals to engage in *autonomous*/self-determined, *controlled* or *impersonal*/amotivated ways across situations and contexts.

In the SDT literature, intrinsic motivation, integrated and identified regulation are often referred to as high self-determined types of motivation. In contrast, introjected and external regulations are considered as controlling/low self-determined types. Lastly, amotivation reflects complete lack of self-determination. According to SDT, psychological need satisfaction and resultant self-determined motivational regulations are often associated with adaptive health-related, affective and behavioural outcomes (Deci & Ryan, 1985; Vallerand, 1997). In contrast, negative consequences, for example physical and psychological pathology and ill-being (Deci & Ryan, 2000), have been linked with psychological need thwarting and low/no self-determined motivation. An overview of the basic propositions of SDT is provided in Figure 1. A review of the applications of SDT in the health and exercise domains is beyond the purposes of this study. Excellent overviews and discussions can be found in Hagger and Chatzisarantis (2007) and Sheldon, Williams, and Joiner (2003). For illustrative

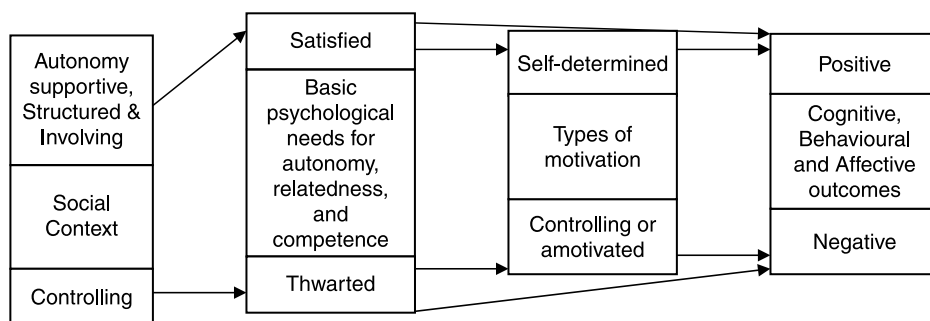


Figure 1. A schematic representation of the self-determination process (adapted from Vallerand, 1997).

purposes, we mention that psychological need satisfaction and/or self-determined motivation types have been found to predict directly or indirectly outcomes such as medication adherence (Williams, Rodin, Ryan, Grolnick, & Deci, 1998), exercise intentions (Chatzisarantis, Hagger, Biddle, Smith, & Wang, 2003), exercise adherence (Edmunds *et al.*, 2008), abstinence from smoking (Williams, Gagné, Ryan, & Deci, 2002), weight loss (Williams, Grow, Freedman, Ryan, & Deci, 1996), healthy eating behaviours (Pelletier, Dion, Slovenic-D'Angelo, & Reid, 2004), and dietary self-care in diabetics (Senécal, Nouwen, & White, 2000).

Coping and motivation research: A case for integration

It is surprising that no research to date in the health domain has considered the joint influence of motivational and coping variables on indicators of psychological and physical health. Research in other domains, such as education (Ryan & Connell, 1989), relationships (e.g. Knee, Patrick, Victor, Nanayakkara & Neighbors, 2002), and sport (Amiot, Gaudreau, & Blanchard, 2004), has examined relationships between different aspects of coping and motivation but no systematic attempts for integration have been made. In an effort to instigate research in the health as well as in other life domains, we propose a model (see Figure 2) that attempts to integrate aspects of the CMRT of coping and SDT of motivation. This model builds upon and expands existing literature on the interrelationships among the SDT components (see Figure 1), and on another volume of literature on the interrelationships among the CMRT components, and shows how variables from the two theories are associated.

Our model presents a sequence of processes involving distinct variables. However, it should be emphasized that in Lazarus' (1999) view, motivation, appraisal, coping, stress, and emotion are conjoined in nature and should be separated only for the purposes of discussion. Further, we believe that most of the variables in the model are related in a

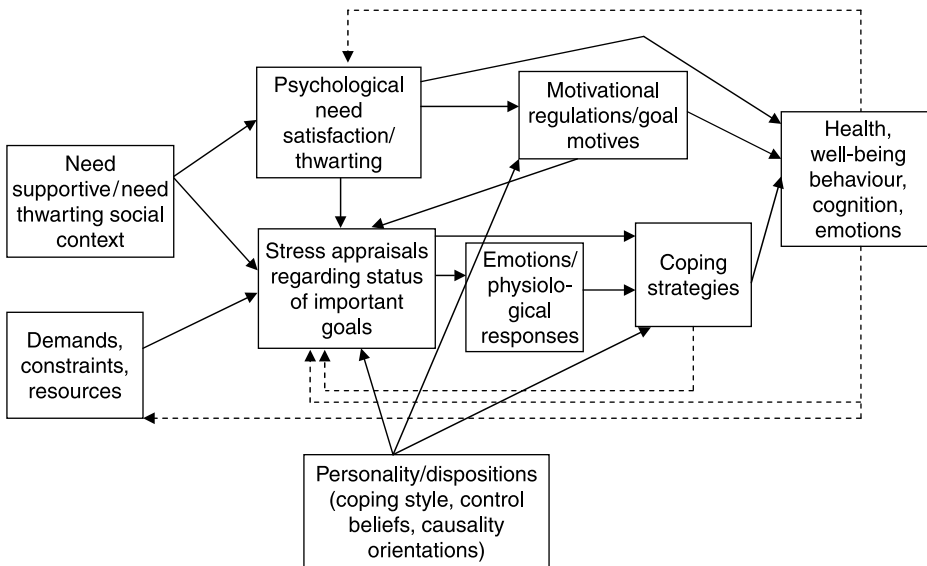


Figure 2. Integrating central components of the cognitive-motivational-relational theory of coping (Lazarus, 1991) and self-determination theory of motivation (Deci & Ryan, 1985).

reciprocal manner. Our model is not an all encompassing model and does not attempt to depict every possible relationship (direct, indirect, and recursive) among its constituent variables. In our description below, we focus only on what we perceive as salient explanatory paths of interconnected processes. We avoid repeating the description of how the SDT variables are interrelated (to this end, see Figure 1).

According to the model, a diverse range of demands and constraints, as well as the degree of availability of resources (e.g. prior experience), lead to stress appraisals as to whether important goals are challenged, harmed or threatened, or whether the consequences are benign. Such primary appraisals and associated secondary appraisals of situational control are also influenced by the degree to which the immediate social environment is supportive or undermines one's three fundamental psychological needs. We expect that autonomy support, structure, and involvement can, both directly and indirectly via psychological need satisfaction, equip individuals to appraise stressful incidents in a more positive light, for example, as challenges that have to be overcome as opposed to harmful/threatening events. This is because such social environments acknowledge individuals' true feelings, offer feedback and guidance, and are not hostile, judgemental or prescriptive about how individuals should react (Skinner & Edge, 2002). Further, they encourage individuals to react in accordance with their true priorities, helping them to differentiate between goals and temptations, high and low priority goals. Therefore, such environments enable individuals to appraise the situation as more controllable and invest full regulatory resources to the stressful episode. An example here would be of a physician or health adviser creating an optimal psychological environment to help someone to deal with setbacks in terms of his/her attempts to reduce or quit smoking. On the other hand, controlling environments thwart individuals' psychological needs and result in more maladaptive appraisals. This is because such environments are coercive, highly prescriptive and critical, and offer conditional regard. These environments often exacerbate how demands and constraints are appraised, foster fears of failure and personal inadequacy, and restrict individuals from mobilizing full regulatory resources. For example, with regard to the latter point, Muraven, Gagné and Rosman (2008) have shown that feeling compelled to exert self-control requires more self-control strength and leads to greater energy depletion than exerting self-control for more autonomous reasons.

Stress appraisals can also be influenced directly by the satisfaction of the three psychological needs. Skinner and Edge (2002) suggest that the three basic psychological needs are central in shaping how we appraise and cope with stress. These authors view appraisals of stressful situations as challenges or threats to the three psychological needs. However, in our model we adopt Lazarus' view of appraisals as evaluations of goal striving attempts and propose that psychological need satisfaction can play an important role as antecedents of such appraisals. When individuals feel autonomous, competent and related in a particular stressful encounter, they are more likely to appraise demands or constraints on goals as challenges that have to be overcome, as opposed to threats or losses. An example here would be of an overweight individual on an exercise prescription programme. If the goal of this individual is to lose weight, then difficulties associated with this goal (e.g. slow progress, setbacks due to injury/illness) will be appraised differently depending on the degree to which the individual feels his/her psychological needs have been satisfied in the programme.

Psychological need satisfaction is also related to secondary appraisals. Autonomy and competence need satisfaction promote secondary appraisals of situational control because individuals feel a sense of ownership and effectance in terms of their

goal striving. Further, feelings of relatedness remind individuals that there is a social network upon which they can rely for emotional support and instrumental advice. In contrast, when the three psychological needs are thwarted, individuals are likely to feel lack of control, helplessness, and alienation. Even relatively minor stressors could be intensified and create pressure and appraisals of fear, insecurity, or damage.

We also propose that stress appraisals will be shaped by the type of motivation that individuals have in a stressful encounter. This is a possibility also suggested by Amiot *et al.* (2004) and Skinner and Edge (2002). We believe that motivation plays a role not only in terms of contextual regulatory mechanisms as we have explained earlier (e.g. in terms of whether one is high self-determined or low self-determined in a particular context), but also in terms of the motives that underlie specific goal striving (e.g. whether one is high or low self-determined with regard to the pursuit of a particular goal in a given context). With regard to the latter, Smith, Ntoumanis, and Duda (2007), based on Sheldon and Elliot's (1999) self-concordance model, showed that individuals can have different motives for different goals they pursue in the sport context. We believe that self-determined motivation, contextual or goal-specific, will result in more positive stress appraisals than low or non-self-determined motivation. For example, amotivation with regard to a particular diet programme or engagement in it out of feelings of pressure, shame, or guilt, can lead one to experience intra-psychic pressure, resulting in appraisals of heightened threat and low situational control when facing obstacles and setbacks. In contrast, engaging in the diet programme because one values its benefits or in an effort to integrate it with one's other higher values and goals (e.g. being a healthy person), is more likely to lead to adaptive stress appraisals and perceptions of situational control.

Our proposed model also emphasizes the influence of personality/dispositional factors in shaping stress appraisals, motivation and the choice of coping strategies. As explained earlier on in this article, generalized beliefs about control can influence stress appraisals (Folkman, 1984). Further, autonomous, controlled and impersonal causality orientations can influence the extent to which one will be high, low or non-self-determined in a particular domain or within a particular situation (Deci & Ryan, 2002; Vallerand, 1997). Lastly, coping styles might influence the choice of coping responses in a particular stressful encounter. For example, some individuals are more likely to have an approach coping style and use more direct coping strategies across a wide variety of situations. Although the CMRT of coping downplays the influence of dispositions on coping choices and views coping as being situation-specific, Lazarus (1993, 1999) in his later writings suggested that coping traits or styles may exist, as some coping strategies are more consistently observed across stressful encounters than others. In fact, Lazarus (1993) called for more research to 'reveal the degree to which diverse coping strategies are influenced by the social context, personality variables or both' (p. 239). As previously stated in this manuscript, coping styles are advocated by other researchers in the area of coping.

Coping responses in a stressful encounter are influenced not only by coping dispositions, but also, as argued by Lazarus (1991), by stress appraisals and associated emotional/physiological responses (e.g. activation of autonomic nervous system and hormonal reactions). Situational appraisals of challenge and perceived control should activate positive emotions (e.g. happiness, pride) and facilitative perceptions of arousal, and should lead to the employment of problem-focused coping strategies (e.g. planning, prioritisation). In contrast, situational appraisals of threat, harm/loss or uncontrollability often lead to negative emotions (e.g. anger, sadness, disgust), unpleasant physiological

responses and emotion-focused (e.g. venting of emotions) coping responses (e.g. as often happens when someone receives news about a serious illness of a significant other). Stress appraisals are expected to have direct effects on coping strategies in addition to their indirect effects via emotional/physiological responses.

In past research, direct relationships were found between motivational regulations and coping (Amiot *et al.*, 2004; Ryan & Connell, 1989) and between psychological needs and coping (Skinner & Edge, 2002). The general pattern of these relationships was that psychological need satisfaction and self-determined motivation were associated with adaptive coping responses. We have not proposed such direct links in our model because we believe that such relationships are probably mediated by stress appraisals as coping responses always require an evaluation of a stressful encounter (Lazarus, 1991). Empirical evidence is needed to examine the degree of mediation in these relationships.

Effective coping responses can lead to a variety of positive outcomes such as physical and psychological health, positive adaptations to illness, subjective well-being, behavioural indicators of persistence or commitment to goal pursuit, goal progress and accomplishment, and positive emotional reactions and cognitions (for an overview of the extant literature, see Aldwin, 2000; Lazarus, 1991). However, concluding that certain coping strategies are effective (or that other strategies are ineffective) should not be carried out on the basis of resultant outcomes. Folkman (1992) outlined several limitations of this approach including the difficulty of identifying adaptive outcomes for diverse contexts, the likelihood that the same coping strategy might not have consistent outcomes across individuals, stress encounters, or different stages of the same encounter (e.g. because of differences in motivation), and the possibility of choosing inappropriate outcome variables. For example, with regard to the latter, it is inappropriate to equate coping with solving of problems and reduction of stress when such outcomes are sometimes impossible (e.g. coping with terminal illness). In such cases more appropriate criteria (e.g. degree of psychological adjustment and accommodation) that give emphasis on processes rather than outcomes are needed. The latter approach is consistent with the goodness of model fit proposed by the CMRT of coping. As explained earlier, this approach gives emphasis on the match between situational appraisals of control and coping choices, as well as the ability of individuals to demonstrate coping flexibility in changing circumstances (Folkman & Moskowitz, 2004). Terry and Hynes' (1998) study of a sample of women dealing with IVF treatment (an uncontrollable stressor) shows the importance of matching appraisals and coping responses. In this study, 'problem-management' strategies led to poor psychological adjustment whereas 'emotional approach' coping resulted in better adjustment.

As we stated in the introduction to our model, we expect that most of its variables will be reciprocally related over time. For example, the outcomes of the coping process should influence evaluations of psychological need satisfaction. To illustrate the point, psychological adjustment, goal attainment, or progress and improvements in health should enhance feelings of effectance, control and/or attachment to others. In contrast, less successful outcomes can lead to or exacerbate feelings of psychological need thwarting. Further, coping strategies and coping outcomes will lead to reappraisal of stressors (Lazarus, 1991). For example, effective coping strategies might lead to re-appraisals of challenge for a previously perceived as threatening stressor, resulting in further effective coping efforts to deal with the situation (e.g. chemotherapy treatment). Also, in certain situations, positive outcomes (e.g. improved quality of life) resulting from effective coping (e.g. changing one's priorities, time management strategies) can reduce or eliminate the impact of a particular demand or constraint (e.g. rehabilitating from a heart attack).

Conclusions

We hope that this paper and the proposed integrative model will instigate research on how personal and contextual motivational factors affect coping appraisals, coping responses and important outcomes in the health and other life domains. Studying the coping process from a SDT perspective is important because the view of motivation taken by the CMRT of coping is rather restrictive. For example, rather than examining motivation simply in terms of progress or setbacks during the goal striving process, it is imperative to identify whether an individual is high, low or non-self-determined during goal pursuit, whether his/her psychological needs are satisfied or thwarted during this pursuit, and whether the socio-contextual environment plays a supportive or undermining role. From a SDT of motivation perspective, the inclusion of appraisals, emotions, and coping responses is also imperative in order to better understand responses and adaptations in situations where individuals experience difficulties, setbacks or losses during their strivings. Although it is claimed (e.g. Vallerand, 1997) that self-determined motivation and psychological need satisfaction lead to more positive outcomes, the mediatory processes that facilitate such outcomes are not well-studied. For example, how can high self-determined versus low self-determined motivation to caregiving predict variations in the quality and quantity of caregiving, especially during rough periods?

We offer our model as an initial platform for generating new research which, besides its theoretical interest, may have important applied implications. For example, it is often argued in the coping literature that psychologists working with individuals who are in stressful situations should help these individuals with how they appraise these situations and how to choose effective coping responses. However, we argue that it is also important that psychologists understand the personal and contextual motivational determinants of their clients' goals which are at stake in these stressful situations. For example, if weight loss is a valued goal at stake, how individuals appraise and cope with difficulties in their goal striving might be determined to a significant extent by whether they pursue this goal for self-determined or controlled reasons and whether their social environment (e.g. family) fosters or thwarts their psychological needs during goal striving. The impetus for this paper was the surprisingly scarce amount of research on how coping and motivational factors interrelate in the health domain. Empirical testing is needed to examine the plausibility of the proposed paths and sequences within a variety of stressful situations (e.g. medical screening tests, caregiving responsibilities, adaptation to illness, weight and body image related problems, etc.), modifying the integrative model where appropriate. The role of individual (e.g. age, gender) and societal factors (e.g. culture), as well as the type of stressors (e.g. acute vs. chronic, single vs. multiple) in the model should also be explored by future research. Experimental (e.g. interventions to promote need supportive contexts) and longitudinal research is particularly important to examine the causal and reciprocal nature of the proposed mechanisms and links.

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