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Proactive Approaches to Successful Aging: One Clear Path through the Forest

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Abstract

The importance of successful aging is increasingly acknowledged in the field of gerontology. In this paper we contribute to ongoing efforts to clarify and operationalize this concept by presenting our revised Comprehensive Preventive Corrective Proactive (PCP) model that builds on relevant research traditions, our prior formulations and accumulating research evidence based on testing this model. Recognizing biopsychosocial challenges and contextual stressors that are normative for older individuals, we emphasize the critical role of proactive behavioral adaptations in ameliorating the adverse effects of stressors. We argue that competent actions to address age-related changes and stressors are necessary to achieve positive quality-of-life outcomes. We propose that future research may benefit from employing more complex methodological approaches and data analytic tools.

Keywords

Proactive aging; Biopsychosocial challenges; Adaptations; Successful aging; Quality of life

Introduction

Gerontologists have been both intrigued with and perplexed by the concept of successful aging in their search to understand the future prospects of the growing numbers of people around the globe who are living to a ripe old age. Some of the fundamental controversies in this search involve consideration of objective versus subjective indicators and unidimensional versus multidimensional definitions of success [1]. Other key distinctions have addressed process- versus outcome-oriented views of success [2]. To the extent that the search to understand successful aging remains a persistent theme in the field of gerontology, development of testable theoretical frameworks is needed.

In this paper, we aim to expand the discussion of successful aging based on our evolving theory of Preventive and Corrective Proactivity (PCP) [3–5]. We aim to summarize the theoretical background of our work and present our recent thinking about salient variables in a new Comprehensive PCP model (fig. 1). Along with a theoretical discussion, we also

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present recent empirical support for our model [6–8]. We also use this opportunity to point the way towards applications of the model to cope with specific stressors related to aging in a targeted fashion [9].

Historical Reflections

Although the usefulness of the successful aging construct has been questioned, the notion of understanding successful aging has long-standing historical roots. Early definitions of successful aging can be traced back to the teachings of Plato that profess hope for successful aging through spirituality. He wrote: ‘The spiritual eyesight improves as the physical eyesight declines.’ In his writings about the nature of good aging, Cicero honored and even idealized old age: ‘Old age, especially an honored old age, has so great an authority that it is of greater value than all the pleasures of youth.’ Despite more limited life expectancy in the past, there has been frequent co-occurrence of late life and frailty. We thus observe clear parallels with past notions of successful aging. The ancient ideas we noted hint at the links of successful aging to society’s general ‘valuation of late life’ [10] and the existential dimensions of success [11].

In recent gerontological discussions and research, the focus of outcome-based models has been on the maintenance of good physical health, including the avoidance of chronic illness and functional limitations [12]. Process-oriented models have taken an alternative view and emphasized compensatory psychological and social mechanisms in dealing with age-related declines [13, 14]. Recent work has also recognized the significant role of social involvement and participation in contributing to wellness in late life [15]. New understandings of successful aging have been fostered by recent interest in resilience, posttraumatic growth, subjective evaluations of aging well and attainment of a meaningful life [1].

In this paper, we present one useful formulation that seeks to describe both processes and outcomes that can define criteria for successful aging. Our processes emphasize proactive behavioral adaptations, while our outcomes include the maintenance of psychological well-being and good quality of life (QOL) in old age. Our model seeks to present a parsimonious formulation that offers insights into behaviors that can enhance the quality of late life. To the extent that mechanisms as well as behavioral processes can be described and understood, we can also look toward the development of policies, practices and interventions that can enhance such behaviors and facilitate the attainment of positive QOL outcomes [16].

Overview of the Comprehensive PCP Model

The proactivity model of successful aging is based on the assumption that with increasing age there is an accumulation of health-related and social stressors [17]. Without such normative age-related stressors, there would be no need to distinguish successful aging from successful living at any age. Based on our recognition of the inevitability of age-related stressors, our formulation is anchored in the stress process theory [18, 19]. Those individuals who can maintain the requisites of successful aging based on good physical and mental health and engagement in social activities without any conscious coping efforts may be referred to as ‘lucky agers’ [20]. However, for most older adults facing aging-related

stressors such as health declines or losses in other domains, competent coping and adaptation to age-related changes and stressors is necessary in order to achieve or maintain positive QOL outcomes [21, 22].

We consider goal-directed behavioral orientations that we term proactive adaptations to be key to successfully meeting challenges of extant or impending normative stressors of aging.

These transactional behaviors, which are anchored in future-oriented thinking, reflect human agency directed at stress reduction, resource development and problem resolution. A unique feature of the specific proactive behaviors proposed in our model (fig. 1) is that they target specific stressors that are associated with aging. For example, health promotion and proactive illness management are adaptations relevant to chronic illness. Similarly, anticipatory moves and environmental modifications target lack of person-environment fit.

The concept of proactivity first received attention in the context of person-environment transactions, as Lawton [23] emphasized the value of environmental proactivity that aimed to overcome environmental challenges in late life. This concept resonated with our prior work on the value of person-environment fit in the context of long-term care institutions [24]. An interest in proactivity in an ecological context was subsequently related to older adults' attempts to maintain autonomy in the face of environmental constraints [25].

Building on the broader ecological context of the stress process paradigm [18], we developed our theory of PCP [3]. We sought a broader framework that would address multiple domains of stressors, in addition to environmental challenges faced by older adults. This theory is consistent with the conceptualization of proactivity as an instrumental adaptive orientation that is aimed at altering potential risks posed by environmental events or physical changes due to aging. Consistent with our formulation of the PCP model, other scholars have also addressed the value of proactive coping for achieving successful adaptation to potential stressors [26]. We posit that proactivity originates from future-oriented motivations and refers to behavioral efforts to build one's resources and to direct them towards preventing or minimizing problem situations or environments [3]. Although proactivity and proactive adaptations are sometimes used interchangeably, the former term is akin to the broader construct of 'agency' in the field of sociology that refers to the aggregate of individual volitional actions in the face of structural constraints [27]. Proactive adaptations in our model refer to specific behavioral actions undertaken by older individuals to actively deal with impending or extant aging-related stressors. The concept of proactivity is also consistent with strength-based approaches to meeting stressors and challenges of aging that include resilience [28] and self-regulation [29, 30]. While proactivity can be a valuable behavioral orientation throughout the life course, it plays a more salient role in late life, when individuals encounter more normative stressors and challenges related to aging. Instrumental coping dispositions [31] are viewed in our model as part of the psychological resources that are attitudinal antecedents of proactive behaviors. Furthermore, while instrumental or affective coping is a reaction to already existing stressors, proactive adaptations also have a strong preventive focus.

Stressors

In our Comprehensive PCP model, we specify normative stressors of aging, representing unique challenges that commonly occur in late life [17]. These include recent life events that are prevalent in old age, such as health problems, social losses and lack of person-environment fit [3]. The stressors serve as external stimuli that call for unique adaptive responses. Stressors are expected to diminish good QOL, in the absence of effective behavioral adaptations.

Our original formulation focused only on recent life events. In subsequent formulations [4], however, we recognized that late-life stressors reflect only one important segment in the life course, representing old age. As depicted in our model (fig. 1), cumulative stressors also need to be considered, in addition to stressors posed by recent life events. Cumulative stressors are more diverse than normative stressors of aging, and we acknowledge their roles only in general terms in our model. Examples of cumulative stressors include social discrimination or inequality in getting access to financial resources throughout the life course that may put individuals' QOL at risk [32].

QOL Outcomes

In our Comprehensive PCP model, we posit 5 components as essential to the achievement of good QOL (fig. 1). We note that most of these subjective components of QOL outcomes (e.g. positive affective states, life satisfaction, meaning in life) share variances rather than being orthogonal. Nevertheless, we also note that different outcomes may respond in distinctive ways to other model components. Although physical health and functionality are emphasized as outcome criteria for success in other aging models [20], we aim to avoid circularity by considering them only as stressors in our formulation. Thus, our QOL outcomes focus primarily on subjective well-being outcomes. Among objective QOL outcomes, we consider valued activities and relationships (fig. 1).

Psychological well-being has been traditionally considered as a key positive outcome determining good QOL. Recognizing that positive and negative affect represent independent outcomes, we refer to these variables as affective states in our model. Life satisfaction also represents an important component of QOL outcomes in models of successful aging. Although we considered life satisfaction as a disposition in our original model [3], our recent empirical research supports the notion that life satisfaction is better viewed as an outcome that may be influenced by proactive adaptations, such as helping others [7, 8]. In contrast to psychological well-being, which is viewed as an affective state responsive to present circumstances, life satisfaction reflects a cognitive appraisal that evaluates one's current state based on social comparisons.

Focus on meaning in life as a component of QOL reflects our recognition of the importance of existential outcomes for successful aging [11]. This outcome variable becomes particularly salient as older adults approach the final years of life and come to terms with the approaching end of life [33]. As physical health wanes, finding meaning in life plays an increasingly central role in determining the QOL for older individuals [34].

Maintenance of valued activities and relationships represents a more objective aspect of QOL that recognizes the importance of social involvements for good QOL. In a cross-cultural context and in the context of the approaching end of life, maintenance of valued relationships as well as valued activities constitutes a desirable outcome in late life.

Given that several recent empirical studies call attention to the salience of subjective perceptions of successful aging for defining QOL outcomes [12], we now include self-evaluations of success in aging as an additional component of QOL. We thus acknowledge that if older people appraise their resources as adequate and their behavioral adaptations in dealing with developmental challenges as successful, they will be likely to maintain good QOL.

Resources

External Resources—It is part of traditional expectations within the stress paradigm that availability of resources would serve as a moderator between stress and negative outcomes and enhance proactive behavioral adaptations [35]. While recognizing that numerous external resources can benefit elders, we focus on financial resources and available social support as key external resources in our model. Financial resources can ensure access and utilization of formal services [36]. This can help older adults cope better with chronic illness and the ensuing disability cascade. Availability of informal sources of support is also a necessary prerequisite for marshaling support that could contribute to good QOL. Indeed, in recent gerontological literature there has been a great deal of attention directed to the value of social capital, both as a personal resource and as a feature of the social environment [35, 37].

Internal Resources—Internal resources constitute dispositions or attitudes that can promote proactive adaptations. In the framework of the stress model, such dispositional characteristics are viewed as potential moderators that can diminish the adverse effects of stressors of QOL outcomes. We also propose that internal resources can enhance proactive behavioral adaptations and can thus impact positive outcomes.

Our Comprehensive PCP model expands the range of internal resources considered. Based on our empirical work, we retained 4 components of our original model, namely optimism (previously referred to as hopefulness), self-esteem, altruism and coping/reappraisals. These are viewed as particularly important internal resources that contribute to engagement in proactive adaptations. Elderly persons who portray a generosity of spirit, high self-esteem and instrumental coping dispositions are more likely to take initiatives involving goal-directed behaviors that anticipate and address future stressors. Our revised Comprehensive PCP model now includes future orientation and internal locus of control as dispositions that are likely to promote proactive adaptations [38]. To the extent that older adults are motivated to orient their actions toward the future, they are likely to engage in proactive adaptations such as making plans, anticipatory moves and health promotion [38]. Internal locus of control refers to beliefs about one's capability to shape and exert influence over life circumstances. Control has been found to contribute to proactive adaptations as well as to good QOL in the context of aging [39]. Even our expanded list reflects only selected

dispositions, and we note that other dispositional characteristics, such as personality, may also represent useful resources that can enhance proactive adaptations [29]. We note that the dispositional characteristics included in our model, reflecting attitudes and cognitive orientations, could also be framed as more volitional aspects of secondary control and have been considered important aspects of adaptation in psychological theorizing [28].

Proactive Behavioral Adaptations

Proactive adaptations refer to both preventive and corrective behavioral orientations that serve as the cornerstones and most innovative components of our PCP model. Proactive adaptations have clear goals that respond to current and perceived future situational demands and to aging-related stressors. Thus, behavioral proactivity is viewed as transactional and as responsive to environmental influences rather than being a trait [40]. Preventive behaviors are generally temporally antecedent to stressors. They can serve dual goals of self-enhancement and positioning the self to be more resourceful in encountering stressful life situations [5]. In contrast, corrective adaptations generally come into play once stressors have arisen. They can assist older adults to activate resources and to engage in compensatory activities that counteract adverse effects of stressors. Thus, our conceptualization of proactive behaviors not only specifies compensatory behaviors proposed in the prior Selective Optimization and Compensation model [13, 41] but also includes preventive actions that are compatible with notions of self-regulation [29] and are intended to lessen the stressors and challenges associated with aging.

We recognize prior efforts to consider future-oriented motivations for self-regulatory behaviors in late life, such as Carstensen's [42] model of socio-emotional selectivity. Socio-emotional selectivity theory proposes perception of lifetime left as the main motivating factor for shaping social interactions in late life. We take a broader view of motivational antecedents that contribute to older individuals' proactive adaptations. In our view, the motivations for older individuals include cognitive appraisals of past and future stressors and a desire to maintain good QOL. Preventive adaptations are based on anticipating future stressors, while corrective adaptations are likely to be motivated by the need to address extant stressors. Furthermore, we focus on the value of engagement in social interactions, including helping and marshaling support by older adults, rather than on limiting social interactions in late life. We concur with Carstensen and colleagues [42, 43] regarding the importance of deriving emotional meaning in life among older adults, as reflected in our inclusion of 'meaning in life' as well as subjective evaluations of success among our QOL outcome variables. Nevertheless, our focus is less on motivations for behavioral adaptations, including social interactions, and more on the benefits of behavioral adaptations for improving QOL outcomes.

Regarding the distinction we make between preventive and corrective adaptations, we note that these offer useful general guidelines. However, we recognize that preventive adaptations can at times also be used for corrective purposes. We consider the lack of hard and fast definitions of when an action is preventive and when it is corrective to be the strength of our formulation that ensures its applicability and usefulness with different sets of explicated assumptions.

All of the specified proactive adaptations share common elements of goal-directed instrumental behaviors. While we propose a set of behavioral adaptations as particularly salient, we do not preclude the relevance of other adaptations. The carefully selected behavioral adaptations that address the normative stressors outlined in our model (including health promotion, helping others, planning and anticipatory moves) aim to be comprehensive, though not exhaustive. Below, we illustrate our approach by noting the salience of different preventive and corrective adaptations for dealing with normative stressors.

Preventive Adaptations—In our Comprehensive PCP model, we emphasize 4 specific behavioral adaptations that target potential challenges and stressors related to aging. We do so by focusing on health promotion, planning ahead, offering help to others and undertaking anticipatory moves. These 4 types of behaviors address potential aging-related stressors in different domains, such as health, role performance, social life and life space.

Health promotion includes engagement in healthy lifestyles such as healthy diets and exercise. The preventive aspect of health promotion relates to reducing or delaying the likelihood of developing chronic illnesses and diminishing the progression of chronic health problems. We thus note the useful role of exercise even in the presence of chronic disease. For someone with arthritis, exercise will not cure the disease but may prevent exacerbation. In our research exploring the proposed PCP model, we found that health-promoting behaviors, even when initiated in late life, reduce or delay the likelihood of developing chronic illnesses which would threaten positive QOL outcomes [38].

Helping others in the form of volunteering or providing informal assistance to others has been found to improve positive affective states as well as life satisfaction in our longitudinal research [8]. Based on role theories and self-esteem enhancement theories, other empirical studies have also demonstrated that helping others contributes to a sense of worth as well as positive affect [15].

In the gerontological literature, the importance of planning for the future in late life has been emphasized in the work of Sorensen and Pinquart [44] in anticipation of future care needs. In the current proactivity model, planning is not limited to ensuring future support but also encompasses forward-looking action that may be in anticipation of new activities, social engagements or environmental options. Indeed, in our prior studies such general planning has been found to diminish the adverse effects of chronic illness and social losses on the psychological well-being of older adults [7]. While health promotion is likely to serve preventive functions by reducing the incidence of stress, helping others and planning ahead are likely to exert a positive impact in improving or mobilizing resources.

Anticipatory moves have been added as a preventive adaptation in the Comprehensive PCP model. Given that declining health can lead to a poor fit between the individual and their living environment [45], older individuals can undertake anticipatory moves to bring them closer to potential social support or resources. They can thus relocate to more suitable low-maintenance homes or to more favorable climates [46]. Consideration of person-

environment fit as an environmental stressor and anticipatory moves as preventive adaptations acknowledges the ecological dimensions of successful aging.

Corrective Adaptations—Corrective adaptations come into play after older adults have experienced normative stressors. These behavioral efforts may be viewed as complementing preventive adaptations and are relevant to dealing with specific stressors. Role substitution is particularly relevant to finding meaningful new social roles after retirement or after the loss of a spouse. After experiencing loss of social roles, finding new or substitute social roles can contribute to maintenance of valued activities and relationships.

Marshaling support relates to the application of proactive help-seeking skills to dealing with diverse problem situations, ranging from chronic illness to social losses and lack of person-environment fit. Our empirical findings confirm the importance of proactive help-seeking by elders for improving QOL over time in the face of stressful life events [7].

Environmental modifications have been proposed in our original model as adaptations particularly salient to overcoming environmental challenges and lack of person-environment fit [46]. Notably, environmental modifications can reduce the threat of falls and protect older adults who are dealing with stressors such as increasing frailty and functional limitations in the context of aging in place.

Proactive illness management is a newly added component of the Comprehensive PCP model which has been noted as particularly useful in coping with significant health conditions such as cancer [9]. In contrast to health promotion, which may be viewed as preventing or delaying the onset of chronic illness, proactive illness management serves corrective functions after an illness has been diagnosed. This adaptation involves self-care as well as proactive consumerism and advocacy in seeking and obtaining responsive healthcare [47].

Contextual Influences

Although the Comprehensive PCP model emphasizes human agency in the face of stressful life situations, it is important to acknowledge that the stress paradigm, as related to the individual, is embedded in a wider structural context. Accordingly, stressors and resources are stratified by the individual's position in the social structure [48]. These influences are typically embodied in demographic characteristics of age, gender, race, education and marital status. The role of education in contributing to cumulative advantage has been emerging in the literature [49]. Educational attainment provides access to higher income and social status positions. It affects stressors faced and lifestyles, habits and attitudes that influence the use of proactive adaptations to deal with stressors.

Contextual influences are also defined by the spatial environmental context that is reflected in living arrangements, ranging from housing sites to neighborhood or geographical locations [5]. Marshaling support will thus be quite different for elders living in age-integrated communities compared to those living in age-segregated locales. We argue that contextual influences play an important role in shaping both internal and external resources and in impacting every component of the PCP model.

Significance and Clinical Implications

In this article, we advance an integrative and comprehensive model that extends our previous PCP model of successful aging. This Comprehensive PCP model is distinct from previous successful aging models for several reasons. First, the model considers preventive proactive actions that individuals take as the necessary engines of successful aging. Thus, the Comprehensive PCP model reflects behavioral strategies that help the older adult master the challenges of chronic illness, social losses and lack of person-environment fit. Identifying useful strategies that enable older individuals to adapt and regulate their environment can provide us with useful guidelines for clinical practice and interventions that aim to increase their well-being.

Second, the Comprehensive PCP model explicitly recognizes the multidimensional nature of successful aging by incorporating both processes and outcomes. As noted above, empirical findings as well as qualitative studies support a multidimensional conceptualization of successful aging. A meta-analysis of studies has noted significant variation in defining successful aging [12]. This variation is likely to be due to the complexity of the concept, which calls for more comprehensive models of successful aging.

Third, the Comprehensive PCP model recognizes the importance of the temporal and spatial context within which each individual ages. Many prior models of successful aging disregard the temporal and spatial context and emphasize only individual efforts in promoting successful aging. As stressors occur in a given context and time, behavioral strategies and adaptation efforts are often tied to their contexts. Therefore, it is crucial to attend to each individual's temporal and spatial context that could facilitate or hinder behavioral and psychological adaptation.

Finally, the Comprehensive PCP model proposes a dynamic interplay between components of the model. Although a simple causal direction is implied (fig. 1), we recognize that multiple plausible paths could be tested. For example, recent stressors such as a diagnosis of cancer or chronic illness may directly influence financial resources, which may limit proactive adaptations and contribute to diminished QOL outcomes. Furthermore, engaging in proactive adaptations in daily life may reduce stressors, which also contributes to improved QOL outcomes. In addition, the operationalization of processes contributing to successful aging is often difficult. For example, the concept of proactive coping embraces processes that consist of many different elements. These changing behaviors and trajectories cannot be determined in any one single measurement.

Our Comprehensive PCP model also calls for innovative methods that can capture the dynamic reciprocal relationship between each component in the model. To examine these interrelations in empirical studies, longitudinal study designs are needed that allow for sophisticated methods, including multilevel modeling. Given that adaptation occurs over time, assessment of each model component could also benefit from time-intensive measurement models (e.g. diary study designs). This would allow for examination of changes in proactive coping behaviors and would help elucidate the interdependence between aging individuals and their environment. Such designs would permit systematic

consideration of each model component to trace aging processes over time and to gain insights about the pathways linking resources, proactive adaptations and QOL. Moreover, using mixed methods (including both qualitative and quantitative approaches) can enhance our understanding of successful aging in a Comprehensive PCP framework.

While it is useful and even necessary to seek conceptual models that are far-reaching and comprehensive, we acknowledge that such full models are difficult to test empirically in any single study. However, we anticipate that cumulatively, research by proponents of the proactivity model as well as other researchers who have attempted to test components of the model [e.g. 50, 51] will help offer empirical support for or help falsify the broad model that we have proposed. Indeed, our prior studies testing selected model components support the value of each component for enhancing QOL outcomes for older adults. For example, we found longitudinal support for our model by documenting the value of health promotion [6], anticipatory moves [46], helping others [7, 8], planning ahead and marshaling support [7].

Furthermore, mixed-method designs offer another venue to test the proactivity model. Qualitative approaches provide in-depth information about the lived experiences of older adults regarding barriers, facilitators and consequences of proactive adaptations. Indeed, a recent study [50] found support for the PCP model using mixed methods. The study concludes: ‘These findings support the utility of applying Kahana and Kahana’s PCP model to further understand the mechanisms that promote successful aging and a high quality of life in situations of illness and disability’ [50].

Implications for Future Research

There are several conceptual issues that future research on successful aging needs to address. Based on the increased importance of social relationships in the aging context, the dynamics of caregiving and care-getting must be better understood [33]. Empirical studies have shown spousal influences on cognition, well-being and health [52]. Although prior studies found interrelatedness in QOL for family dyads in several domains, they have not identified the mechanisms or processes by which one person’s outcomes could affect those of the significant other. Given the close ties each individual shares with his/her partner, it is conceivable that the proactive adaptations of partners exert mutual influences on one another.

Future studies on successful aging also need to consider age-graded models for the oldest old. Although the distinction between the young old and the oldest old is dynamic, varying with societal and historical context [53], scholars have pointed out that the oldest old (i.e. those over the age of 85) experience accelerated terminal declines compared to their younger counterparts [53]. Recent empirical findings confirm the existence of terminal declines in cognitive abilities and subjective well-being as well as the limited plasticity in adjusting to the environmental context among the oldest old [39].

Given the terminal declines in well-being and health domains as well as limitations in optimizing new skills, we argue that successful aging and dying at the end of life should receive greater attention as part of the discussion of successful aging. In the extant

gerontological literature, aging successfully is generally separated from achieving a good death or consideration of coming to terms with the end of life [33]. However, preparing for facing the end of life would be another important manifestation of proactivity in the context of the oldest old.

Conclusions

We are excited to have the opportunity to bring our evolving Comprehensive PCP model to the attention of gerontologists from diverse countries and of diverse intellectual traditions. The concept of successful aging presents an inviting and verdant forest of ideas that offers a scientific destination for the last segment of the life course. To appreciate this destination we must forge meaningful pathways that can connect us to prior theoretical orientations and offer guidelines for future empirical studies. We believe that through better understanding of the possibilities for dealing with the challenges of old age, we also learn about opportunities to empower older adults to select their own direction and retain a sense of meaningfulness within the constraints of the final stages of life.

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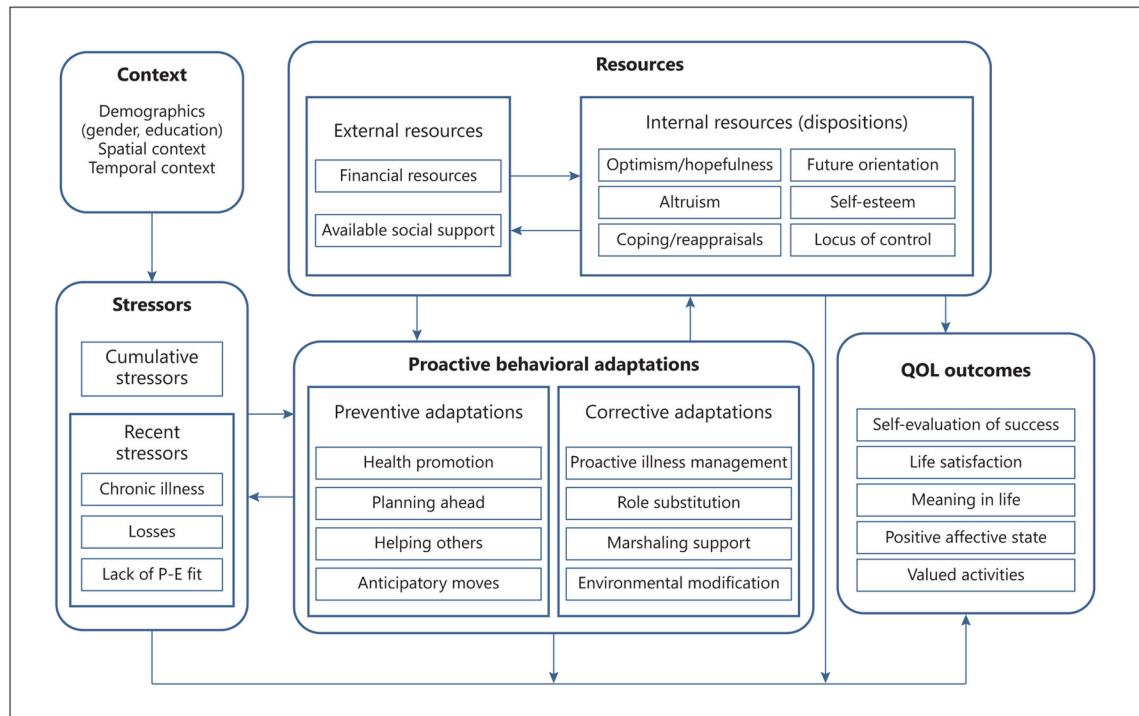


Fig. 1. Successful aging: a Comprehensive PCP model. P-E3= Person-environment. Adapted from Kahana and Kahana [3].