

The Influence of Mood on the Relation between Proactive Coping and Rehabilitation Outcomes*

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RÉSUMÉ

Cette étude a examiné un échantillon de 228 personnes âgées en réhabilitation après chirurgie pour remplacement d'une articulation; elle a porté sur la relation entre une adaptation proactive, l'humeur et les résultats psychologiques et fonctionnels. Faire face proactivement c'est une façon de réagir qui est axée sur les objectifs et nécessite qu'on affronte les facteurs qui incitent le stress comme un défi plutôt qu'une menace. Selon notre hypothèse, les personnes âgées qui adoptent des stratégies proactives d'adaptation subiraient une amélioration du fonctionnement physique et psychologique après la réadaptation et connaîtraient une humeur positive. Le modèle proposé a trouvé du support, par lequel une expérience de vigueur a été trouvée à la médiation de l'effet d'une adaptation proactive sur les résultats. Les implications théoriques et pratiques des résultats de recherche sont discutées dans le contexte des interventions qui encourageraient les personnes âgées à faire face proactivement.

ABSTRACT

The relationship between proactive coping, mood, and psychological and functional outcomes was examined in a sample of 228 older adults undergoing rehabilitation following joint replacement surgery. Proactive coping is a coping style that is goal oriented and involves approaching stressors as challenges rather than threats. It was hypothesized that older adults who use proactive coping strategies would experience improved psychological and functional outcomes following rehabilitation. Further, it was expected that this relation would be mediated by the experience of positive mood. Support for the proposed mediation model was found, whereby the experience of vigor was found to mediate the effect of proactive coping on outcomes. Theoretical and practical implications of the research findings are discussed in the context of interventions to foster proactive coping in older adults.

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Lazarus and Folkman (1984) defined coping as changing cognitive and behavioral efforts to manage psychological stressors. Although research has traditionally focused on reactive coping, which involves compensating for harm or loss in the past, there is growing recognition

that proactive coping is important in understanding stress outcomes (Greenglass, 2002; Schwarzer & Knoll, 2009). Proactive coping is related to goal management rather than risk management, and involves perceiving situations as challenges rather than threats (Greenglass,

2002). It involves building up resources that facilitate goal promotion, personal growth, and striving for improvements in quality of life and overall functioning (Schwarzer & Knoll, 2009).

Proactive coping is a strategy that integrates personal quality-of-life management and self-regulatory goal attainment (Greenglass, 2002). Aspinwall and Taylor (1997) defined proactive coping as a multistage process, which begins with accumulating resources to help deal with stressors. An individual who uses proactive coping strategies may be better able to handle a stressful situation when it occurs. Individuals who use proactive coping strategies may also screen their environments in order to anticipate or detect potential stressors, and act in advance to either prevent or reduce the adverse effects of these stressors (Aspinwall & Taylor, 1997).

In aiming to overcome obstacles to goals, proactive coping is seen as an important component of successful aging (Ouweland, de Ridder, & Bensing, 2007). Older adults who use proactive coping strategies are often goal oriented and have a future temporal orientation (Ouweland, de Ridder, & Bensing, 2008). By engaging in proactive coping they are able to prolong the availability of resources necessary to deal with stressors and consequently delay their disengagement from important goals (Ouweland et al., 2007). Proactive coping is associated with several important psychological and functional outcomes in older adults, including lower levels of daily hassles, and lower levels of depression and functional disability (Fiksenbaum, Greenglass, & Eaton, 2006; Greenglass, Fiksenbaum, & Eaton, 2006).

Engaging in positive coping styles, such as proactive coping, may then encourage the continued experience of positive mood over time (Burns et al., 2006). Even in highly stressful situations, individuals can continue to experience not only negative but also positive mood states. The continued experience of positive states during stressful times has been found to be important in the coping process (Folkman, 1997). For example, among caregivers of individuals with HIV, engaging in positive coping behaviors has been found to be associated with higher levels of positive affect, which in turn were associated with lower levels of negative physical symptoms such as headaches, sores, and chest pain (Billings, Folkman, Acree, & Moskowitz, 2000).

According to the broaden-and-build theory, positive emotions broaden an individual's mindset and allow them to build resources, whereas negative emotions narrow one's thought-action repertoire (Fredrickson, 1998, 2001). The experience of positive emotions is hypothesized to encourage creative experiences and the discovery of new social bonds that can in turn help

build an individual's personal resources, and function as a reserve of psychological capital that can be drawn on in difficult times. Positive emotions may then help individuals to find meaning in stressful encounters and successfully recover from them (Tugade & Fredrickson, 2004). Encouraging the continued experience of positive mood states may thus be one of the ways that proactive coping can lead to more-positive outcomes following exposure to stressful situations. In encouraging the continued experience of positive emotions, positive coping styles such as proactive coping may be especially important for older adults faced with stressful situations, such as physical rehabilitation following surgery. Research has shown that proactive coping is positively associated with behavioral outcomes during rehabilitation following joint replacement (Greenglass, Marques, de Ridder, & Behl, 2005).

The present study examined the association between proactive coping and psychological and functional outcomes in a post-surgical sample of individuals in physical rehabilitation following orthopaedic joint replacement. The orthopaedic replacement of a joint, such as the knee or the hip, is a surgical procedure aimed at reducing pain and improving physical functioning. It is an increasingly common procedure as the population ages, with an 87 per cent increase in the number of procedures performed in Canada between 1996 and 2006 (Canadian Joint Replacement Registry, 2006). In older adults, it is most frequently used following loss of function due to osteoarthritis and rheumatoid arthritis (Canadian Joint Replacement Registry). The surgical procedure and ensuing rehabilitation can be a very stressful time, with patients experiencing stress due to pain, loss of function, loss of independence, financial worries, uncertainty about the future, and concern about loved ones (Ptacek & Pierce, 2003).

Psychological and cognitive factors, including coping, can greatly influence an individual's post-surgical recovery, above and beyond the effects of preoperative function and surgical trauma (Kendell, Saxby, Farrow, & Naisby, 2001; Salmon, Hall, & Peerbhoy, 2001). The emotional response of a patient to hip replacement surgery has been found to influence long-term recovery (Salmon et al., 2001). A similar effect has also been found in older adults with osteoarthritis and fibromyalgia, where the experience of positive mood is associated with improved recovery, even after controlling for physical symptoms (Zautra, Johnson, & Davis, 2005). It is expected that a proactive coping style, given its associations with both improved outcomes following stressful events and with successful aging, will have a similar effect. Of particular interest is to examine the influence of an individual's tendency to engage in proactive coping on the outcomes an individual experiences.

The association of proactive coping and positive mood on both life satisfaction and a measure of functional performance during rehabilitation are examined here. Both life satisfaction and functional performance are important determinants of the quality of life of older adults. Life satisfaction in older adults is associated with improved cognitive functioning and functional status (St. John & Montgomery, 2010), as well as less depression (Hasche, Morrow-Howell, & Proctor, 2010). Improved functional performance in older adult populations is associated with increased activity, independence, and adaptation (Åberg, Sidenvall, Hepworth, O'Reilly, & Lithell, 2005).

In the present study, it is hypothesized that proactive coping is associated with positive rehabilitation outcomes through its association with positive mood. An individual who more often deals with the difficulties they face in a proactive manner is believed to experience greater positive mood throughout the rehabilitation process than an individual who does not cope proactively. For this study we proposed a mediation model, in which the effect of proactive coping on rehabilitation outcomes is mediated by mood. It is hypothesized that proactive coping style will be associated with increased positive mood and decreased negative mood, which, in turn, will be associated with improved psychological and functional outcomes. Furthermore, positive mood should be positively associated with life satisfaction and better performance on a functional test, while negative mood will be negatively associated with these outcome measures.

Method

Participants

Participants included 228 patients admitted to a rehabilitation centre following knee (40%) or hip (60%) replacement. Participants were predominantly female (71%) and had an average age of 67.3 years ($SD = 12.1$). Most participants were married or in common-law relationships (62%), and a slight majority (51.8%) had greater than a high school education. On average, participants were admitted to the rehabilitation centre 7.3 days following their surgery ($SD = 8.2$), and spent a total of 20.9 days in the hospital ($SD = 16.59$) from admission prior to surgery to discharge following the end of their rehabilitation. On the second day following admittance to the centre, patients were identified by nursing staff as having recently undergone joint replacement. Eligible patients were then approached and asked if they would participate in the study. Of the 289 patients approached, 228 agreed to participate in the study, for a total response rate of 79 per cent. Information regarding rehabilitation outcomes at time 2 is available for 202 (89%) of those who participated at time 1.

Procedure

At time 1, following recruitment and after informed written consent was obtained, participants completed a series of self-report measures assessing proactive coping, mood, and life satisfaction. At time 2, on the day prior to a participant's discharge, a standardized assessment of rehabilitation progress, including measuring performance on the two-minute walk, was conducted by trained professionals. An average of 13.7 days separated time 1 and time 2 ($SD = 12.5$). The length of a participant's stay at the rehabilitation centre was decided by their surgeon prior to admission. Collection of these data and all study procedures were undertaken in full compliance of all American Psychological Association ethical standards including the treatment of human participants, and were approved by the institutional review boards of York University and the rehabilitation centre.

Measures

Proactive Coping

Proactive coping style was assessed using the 14-item proactive coping subscale of the Proactive Coping Inventory (Greenglass, Schwarzer, & Taubert, 1999). It assesses an individual's general coping style, rather than assessing reactions to a particular stressor. Respondents were asked to answer how well each statement described the reactions they had to various situations, with responses made on a 4-point scale, ranging from (1) "Not at all true" to (4) "Completely true". Sample items include "I am a 'take charge' person", and "When I experience a problem, I take the initiative in resolving it". The subscale had high internal consistency, with a Cronbach alpha of .82.

Mood

Mood was assessed using a short form of the Profile of Mood States (Shacham, 1983). It contains 37 items, and provides both a total measure of mood disturbance and six subscales: (a) tension-anxiety, (b) depression-dejection, (c) anger-hostility, (d) vigor-activity, (e) fatigue-inertia, and (f) confusion-bewilderment. Notably, only the vigor-activity subscale measures a positive mood state. Cronbach alphas for the total measure of mood disturbance and the six subscales ranged from .76 to .95. For the purposes of this study, only the six subscales were used. Respondents were asked to rate how well each of 37 words described how they felt during the past week. Responses were coded on a 5-point scale, ranging from (0) "Not at all" to (4) "Extremely". Sample items include "On edge" (tension-anxiety), "Cheerful" (vigor-activity), and "Unhappy" (depression-dejection).

Life Satisfaction

Life satisfaction was measured using the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), a five-item measure designed to assess an individual's global cognitive view of his or her life. It had high internal consistency, with a Cronbach alpha of .87. Participants were asked to rate their agreement with items on a 7-point scale ranging from (1) "Strongly disagree" to (7) "Strongly agree". A sample item is "In most ways my life is close to my ideal".

2-Minute Walk

The 2-minute walk (Butland, Pang, & Gross, 1982; Cooper, 1968) is a functional measure of an individual's endurance. It is recommended for use with geriatric populations, as it provides a more feasible measure of functional capacity compared to the 6-minute walk test (Brooks, Davis, & Naglie, 2007). It is simply the number of meters that an individual can walk in 2 minutes in a controlled clinical environment with no outside encouragement. It is a standard part of the patient's rehabilitation outcome assessment, and was administered under the supervision of trained medical professionals.

Results

The means and standard deviations for proactive coping, the six mood dimensions, life satisfaction, and distance walked on the 2-minute walk are provided in Table 1 for the full sample, and separately for those participants who participated in time 2 and those who dropped out of the study. A significant difference was found between those who did and did not participate in time 2 on levels of depression-dejection and confusion-bewilderment, such that those who did not

participate in time 2 reported higher levels of these constructs.

Correlations between the variables of interest are shown in Table 2. Proactive coping was negatively correlated with tension-anxiety and confusion-bewilderment, and positively correlated with vigor-activity, and life satisfaction. Life satisfaction was also correlated with tension-anxiety, vigor-activity, fatigue-inertia, and performance on the 2-minute walk at time 2. In addition to the correlation with life satisfaction, performance on the 2-minute walk at time 2 was also associated with vigor-activity at time 1. Positive correlations were also found between all of the various measures of negative mood. Vigor was found to be negatively correlated with the various measures of negative mood except for anger-hostility and tension-anxiety.

Two multiple mediation models were tested using macros for IBM SPSS Statistics developed by Preacher and Hayes (2008). A bootstrapping methodology with 5,000 re-samples was employed, in which the indirect effect is re-estimated in each resampled data set. Testing a multiple mediation model using traditional regression-based methods would require conducting multiple tests of simple mediation, inflating the type 1 error rate. Additionally, the coefficients from the regression analyses would be sensitive to deviations from normality. The bootstrapping methodology employed allows for a simultaneous evaluation of the proposed mediators, and is further recommended for tests of multiple mediation, as it does not impose the assumption of multivariate normality of the sampling distribution (Preacher & Hayes, 2008).

Using this methodology, significant findings are obtained when the 95 per cent confidence interval of a point estimate does not include zero. In addition to an overall

Table 1: Mean \pm standard deviations of psychological measures and functional outcomes ($n = 228$)

Measure	Total ($n = 228$)		Participated in Time 2 ($n = 202$)		Drop Out ($n = 26$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Proactive Coping	43.40	5.79	43.43	5.85	43.19	5.40
2. Tension – Anxiety	1.04	.76	1.03	.74	1.19	.86
3. Depression – Dejection ^a	.71	.69	.67	.66	.96	.86
4. Anger – Hostility	.55	.73	.53	.70	.75	.92
5. Vigor – Activity	1.42	.94	1.42	.95	1.47	.93
6. Fatigue – Inertia	1.80	1.01	1.76	1.00	2.10	1.01
7. Confusion – Bewilderment ^a	.79	.69	.75	.65	1.03	.94
8. Life Satisfaction	25.71	6.64	25.92	6.50	24.12	7.58
9. 2-Minute Walk Distance (m) ^b	80.62	36.68	80.62	36.68	n/a	n/a

^a Mean difference between participants who completed part 2 and those who dropped out is significant at the .05 level (2-tailed).

^b 2-minute walk distance measured at time 2.

M = mean

SD = standard deviation

Table 2: Intercorrelations between psychological measures and functional outcomes (n = 228)

Measure	1	2	3	4	5	6	7	8	9
1. Proactive Coping	—								
2. Tension – Anxiety	-.15 ^a	—							
3. Depression - Dejection	-.12	.70 ^a	—						
4. Anger – Hostility	.07	.50 ^a	.67 ^a	—					
5. Vigor – Activity	.36 ^a	-.11	-.30 ^a	-.03	—				
6. Fatigue – Inertia	-.03	.53 ^a	.52 ^a	.27 ^a	-.34 ^a	—			
7. Confusion – Bewilderment	-.21 ^a	.63 ^a	.60 ^a	.33 ^a	-.16 ^a	.44 ^a	—		
8. Life Satisfaction	.33 ^a	-.24 ^a	-.23 ^a	-.18 ^a	.30 ^a	-.18 ^a	-.18 ^a	—	
9. 2-Minute Walk Distance (m) ^b	.16 ^a	-.10	-.14	-.10	.25 ^a	-.13	-.08	-.06	—
10. Time in Rehabilitation Centre	-.13	.12	.10	.22 ^a	-.05	-.01	.13	-.12	-.17 ^a

^a Correlation is significant at the .05 level (2-tailed).

^b 2-minute walk distance measured at time 2.

test of the effect of all proposed mediators, the chosen analysis also provides information on the individual indirect effects of each proposed mediator. Note that under a multiple mediation model, a statistically significant direct effect between the predictor and outcome variable is not necessary. This is to account for the possibility that the proposed mediators may be acting in opposite directions, whereby one positively influences the outcome while another negatively influences the outcome, resulting in an overall null effect. Only the 202 participants who completed part two of the study were included in the mediational analyses. Within the mediational analysis, and for all other cases, pairwise deletion was employed.

Proactive coping was entered as the predictor variable, and the six subscales of the profile of mood states were simultaneously entered into the model as potential mediators. Life satisfaction and performance on the 2-minute walk were entered as criterion variables in two separate models, first controlling for the length of time between admission and discharge from the rehabilitation centre. Results from the multiple mediation analyses are shown in Table 3. The total indirect effects of proactive coping through the six proposed mediators accounted for 16 per cent of the variance in life satisfaction and 7.2 per cent of the variance in performance on the 2-minute walk, although only the overall model for life satisfaction was found to be statistically significant. In terms of the individual mood dimensions, a statistically significant indirect effect was found for vigor, which was found to be a mediator of the effect of proactive coping on both life satisfaction and performance on the 2-minute walk.

Discussion

The current study sought to examine the mechanism through which proactive coping would lead to improved outcomes following joint replacement surgery. As expected, proactive coping was associated with

improved outcomes following surgery, including higher levels of life satisfaction when starting rehabilitation, and improved performance on the 2-minute walk when leaving the rehabilitation centre. Support for the overall proposed mediation model was found for life satisfaction, and a significant mediated effect of proactive coping through vigor-activity was found for both life satisfaction and performance on the 2-minute walk. The total amount of variance accounted for was modest.

Of the six mood dimensions entered in the multiple mediation model, only vigor-activity, a positive mood dimension characterized by feeling energetic, cheerful, and lively (Shacham, 1983), emerged as a significant

Table 3: Point estimates and confidence intervals of indirect effect through proposed mediators

Model and Proposed Mediators	Point		95% Confidence Interval	
	Estimate	SE	Lower	Upper
<i>Life Satisfaction</i>				
Tension – Anxiety	.0028	.0035	-.0014	.0143
Depression – Dejection	-.0002	.0027	-.0063	.0050
Anger – Hostility	.0006	.0016	-.0012	.0065
Vigor – Activity	.0131 ^a	.0055	.0039	.0259
Fatigue – Inertia	.0000	.0012	-.0027	.0025
Confusion – Bewilderment	-.0028	.0037	-.0108	.0042
TOTAL MODEL	.0144 ^a	.0069	.0016	.0291
<i>2-Minute Walk^b</i>				
Tension – Anxiety	.0008	.0035	-.0056	.0090
Depression – Dejection	.0003	.0035	-.0058	.0093
Anger – Hostility	-.0002	.0016	-.0057	.0019
Vigor – Activity	.0130 ^a	.0074	.0009	.0306
Fatigue – Inertia	.0002	.0015	-.0018	.0051
Confusion – Bewilderment	-.0015	.0038	-.0094	.0063
TOTAL MODEL	.0122	.0076	-.0015	.0294

^a Significance is obtained when the 95% confidence interval of a point estimate does not include zero.

^b 2-minute walk distance measured at time 2. SE = standard error of measurement

mediator. As hypothesized, the proactive coping style was associated with increased levels of vigor, a positive mood state, which in turn was associated with more-positive rehabilitation outcomes in participants, including increased life satisfaction, and improved performance on a functional outcome measure. Vigor is conceptualized as being a complex moderate-intensity affective state, comprising three related facets: physical strength, emotional energy, and cognitive liveliness (Shirom, 2011). In their work on an implicit taxonomy of emotions, Russell and Steiger (1982) identified vigor as being distinct from both low-intensity positive emotions such as pleasantness and contentment, and also from high-intensity positive emotions such as enthusiasm and joy. Vigor was unique, in that unlike other positive emotions it loaded highly on dimensions reflecting both pleasure and arousal (Russell & Steiger, 1982).

Contrary to our expectations that both positive and negative mood would mediate the influence of proactive coping on rehabilitation outcomes, the predicted model did not hold true for the measures of negative mood. Drawing from positive psychological theories, this supports the theory that positive mood states are not merely the opposite of negative mood states but are a unique marker of an individual's state of well-being (Greenglass et al., 2006). Previous research has demonstrated that positive and negative mood states are separate dimensions which vary independently (Watson, Clark, & Tellegen, 1988). The experience of negative mood following joint replacement may be normative, in that both the surgery and rehabilitation are difficult experiences. It may be the ability of individuals who use proactive coping strategies to continue to feel vigorous during stressful times that leads to improved rehabilitation outcomes. The experience of positive mood may function to sustain the positive outlook associated with proactive coping throughout the rehabilitation process. This pattern of findings suggests that as hypothesized, the influence of proactive coping on rehabilitation outcomes occurs at least in part through influencing an individual's mood.

The findings of the current study highlight the special role of positive mood states on the outcomes an individual experiences. The broaden-and-build theory of positive emotions posits that positive emotions facilitate the accumulation of coping resources (Fredrickson, 1998, 2001). The experience of positive mood states such as feeling vigorous may enable individuals who use proactive coping strategies to be open to the rehabilitation experience. This may result in an increased ability to identify sources of support or means of action available to them. Individuals who use proactive coping strategies may be more-active participants in their rehabilitation process and perceive the process as more

meaningful, compared to those individuals who do not use proactive coping strategies. Alternatively, individuals who use proactive coping strategies may view tasks such as the 2-minute walk as a challenge to be overcome, thus pushing themselves to perform better (Greenglass et al., 2005), and consequently feel a higher degree of satisfaction with their lives. The current study only assessed an individual's general tendency to cope proactively, and did not directly measure the use of proactive coping strategies in the rehabilitation context. Future studies should include more-direct measures of proactive coping, including measures regarding the availability, development, and utilization of various personal and social coping resources.

The link between proactive coping, positive mood, and rehabilitation outcomes is believed to be associated with the ability of positive states such as vigor to foster resilience in individuals, increasing their ability to recover from physical illness (Greenglass et al., 2006). Vigor has been found to be a particularly important positive mood state in the rehabilitation context, as it has a motivational component characterized with being future oriented and having high levels of energy (Greenglass et al., 2006). Previous rehabilitation research has demonstrated that both functional outcomes such as walking behaviour and psychological outcomes such as lower rates of depression (Lee et al., 2001) are associated with feelings of vigor throughout the rehabilitation process, supporting the findings of the current study.

Limitations and Future Directions

The current correlational design raises the possibility that a common variable may account for relations between proactive coping, mood, and the psychological outcome of higher life satisfaction. For example, individuals who have an optimistic outlook may rate themselves more highly on all the measures. Notably, a significant mediated effect of proactive coping through vigor was found for performance on the 2-minute walk, which is distinct from the psychological measures both temporarily and by virtue of being a functional measure. However, while the models that were tested controlled for the length of time an individual spent in rehabilitation, a proxy measure of the difficulty of an individual's rehabilitation process, the lack of baseline measure of performance on the 2-minute walk means that it is not possible to rule out the possibility that performance differences existed prior to rehabilitation.

It is also possible that a more complex model than the one tested in this study may more accurately account for the relation between proactive coping, mood, and rehabilitation outcomes, perhaps involving bi-directional paths between the variables. Engaging in proactive

coping may not only lead to, but also be a consequence of, positive mood. The current study, in assessing only coping style and mood at one time point, was not able to fully examine these possibilities. Future research should assess proactive coping, mood, life satisfaction, and rehabilitation progress at key time points, including prior to surgery, during rehabilitation, and at a 6-month follow-up. Assessing these variables at multiple time points could allow for a more accurate assessment of a causal relationship between mood and proactive coping. Daily assessments during the rehabilitation process in particular would be interesting, as over the course of a long rehabilitation period an individual's feelings and functional performance one day could influence their feelings and performance on subsequent days.

Future studies should also assess a wider variety of both positive and negative mood states. Although vigor, in being associated with physical strength, emotional energy, and cognitive liveliness (Shirom, 2011), might be particularly relevant to the rehabilitation process, it is important to determine if its effect is distinct from both lower- and higher-energy positive emotions, such as contentedness and joy. Also, it is possible that the role of negative mood was underestimated in the current study. Although rates of attrition in the current study were low, results indicated that those participants who did not return for time 2 had significantly higher levels of depression-dejection and confusion-bewilderment than those participants who remained in the study. These proposed studies would help to clarify the interrelations between coping style, mood, and both psychological and functional outcomes, and would also provide important baseline measures of the various constructs, allowing for the development of full longitudinal models examining how these variables may change and interact.

Conclusions

The goal of the current study was to examine the influence of proactive coping and mood on both psychological and functional outcomes following rehabilitation. In line with our hypotheses, the results of this study provide additional evidence of the importance of proactive coping and positive mood states on rehabilitation outcomes. Interventions aimed at improving an individual's rehabilitation outcomes following joint replacement should focus not only on preventing negative states such as depression, but also on fostering a positive and resilient state in patients. These findings are particularly interesting in light of recent interventions that were successful in increasing proactive coping in older adults (Bode, de Ridder, Kuijer, & Bensing, 2007; Thoolen, de Ridder, Bensing, Gorter, & Rutten, 2008). If patients are taught to use proactive coping strategies, they may

be better able to deal with the psychological trauma associated with surgery and be more likely to sustain positive emotional states during a difficult time. This may then help them to experience improved functional recovery. Fostering proactive coping early in the preparation for surgery may help individuals cope with the difficulties they will soon encounter.

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