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Christa K. Schmidt, Trisha L. Raque-Bogdan, Sarah Piontkowski and Kathryn L. Schaefer

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# Putting the positive in health psychology: A content analysis of three journals

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Christa K. Schmidt<sup>1</sup>, Trisha L. Raque-Bogdan<sup>2</sup>,  
Sarah Piontkowski<sup>2</sup>, Kathryn L. Schaefer<sup>2</sup>

## Abstract

This content analysis investigated the inclusion of positive psychological constructs in research published in three leading health psychology journals. A list of positive constructs relevant to health psychology was compiled and their inclusion in these journals was examined. It was found that although there has been a sharp increase in recent years, only 3 percent of all articles published (114 of 3789) included the study of overtly positive constructs. The constructs that have been most and least studied in health psychology were identified and are discussed. This analysis provides insight into the foundations of positive health psychology and identifies future directions.

## Keywords

health psychology, methodology, positive psychology, systematic review, well-being

In the preamble to its Constitution, the World Health Organization (1946: 100) defined health as ‘a state of complete positive physical, mental, and social well-being and not merely the absence of disease or infirmity’. A theoretical understanding of the importance of optimizing well-being and human strengths above and beyond the mere absence of disease has pervaded the field of health psychology for decades. Yet the empirical study of well-being as it relates to health has lagged behind this theoretical appreciation and understanding (Seligman, 2008). Recently, Seligman (2008) called for the creation of the discipline of positive health psychology to focus on the optimal range of human functioning and explore how positive psychology relates to subjective, biological, and functional physical health variables. Accordingly, Seligman (2008)

hypothesized that positive health would be associated with individual and systemic outcomes such as longevity, lower health costs, and better disease prognosis.

Although positive health has been introduced as a new field of study, the extent to which health psychology research has addressed positive variables historically is unknown. Lopez et al. (2006) noted that many proponents of positive psychology have overlooked psychologists’ long-standing

<sup>1</sup>Towson University, Towson, MD, USA

<sup>2</sup>University of Maryland, College Park, MD, USA

## Corresponding author:

Christa K. Schmidt, Towson University, 8000 York Road,  
Towson, MD, 21252, USA.  
Email: ckschmidt@towson.edu

focus on individuals' strengths, thereby failing to credit psychologists for addressing positive variables. For example, understanding subjective perceptions of health and happiness, through the examination of quality of life, has been a cornerstone of health psychology for decades (Fitzpatrick, 2000). Further, the importance of social relationships and support for physical health have been documented since at least the 1970s (Cassell, 1976; Cobb, 1976) and researchers have been examining self-efficacy and health-related outcomes for at least 20 years (Holden, 1991). Thus, it may be premature to call for the *new* discipline of positive health without first exploring how health psychologists have previously incorporated optimal human functioning in their empirical research.

On the other side of the coin, recent commentary in health psychology has pointed to a surge of interest in positive psychology, resulting in research claims and conclusions that may be premature and misleading (Aspinwall and Tedeschi, 2010; Coyne and Tennen, 2010). Research examining how variables such as hope, optimism, and positive emotions may influence physical health outcomes and disease prognosis is very alluring and has attracted the attention of the general media and lay audiences. Thus, proponents of the science of positive psychology insist that the allure of this developing field not outpace its empiricism (Peterson, 2009).

If we are to clearly define what constitutes a field of positive health, it is useful to examine the existing empirical foundation, including how positive constructs have been utilized in health psychology research to this point. Thus, a content analysis of positive constructs in the health psychology literature represents a valuable exploration into health psychologists' efforts to study positive variables and clarifies how research has defined positive health up to this point in time. This method has historically been used when research in one area begins to outpace theoretical and operational definitions within a developing body of literature (e.g. Edwards and Pedrotti, 2008; Lopez et al., 2006). Additionally,

a content analysis provides an opportunity to develop the 'vocabulary of strengths' (Lopez et al., 2006) that exists within health psychology research and gives further direction to future research in this area. Specifically, this method establishes the current constructs under investigation, identifies those that need refinement, exclusion, or emphasis, and allows for a clearer picture of what is meant by 'positive health'. In short, a content analysis of positive constructs in health psychology research steers the course for the development of positive health rooted in the history of health psychology.

### **Positive psychology in health psychology research**

Although the study of positive elements of human functioning from a psychological perspective can be traced to early philosophers, the growth of psychology following the Second World War focused on remediation of mental illness and away from encouraging health and fulfillment for all people (Seligman, 2009). However, the goals of prevention and general well-being remained in the background of psychology within various disciplines, as evidenced by the World Health Organization's (1946) inclusion of physical and psychological well-being in their definition of health (Fave, 2006). In the late 1990s, the focus on prevention returned to the fore, and positive psychology, defined as a 'science of positive subjective experience, positive individual traits, and positive institutions [that] promises to improve the quality of life and to prevent the pathologies that arise when life is barren and meaningless' (Seligman and Csikszentmihalyi, 2000: 5), garnered much interest and support among psychologists across disciplines. In addition to representing a study of prevention that moves beyond remediation, one goal of positive psychology has been to provide scientific evidence of how specific strengths can serve as buffers against illness and provide durable protection in the face of adversity (Fredrickson and Losada, 2005).

Although positive psychology was explicitly defined in the late 1990s and early 2000s, research examining prevention and positive aspects of human functioning has been conducted for some time. Within health psychology, the idea of a 'sound mind in a sound body' has been the basis for research connecting physical health to psychological functioning. The biopsychosocial model of health, for example, proposed including individuals' subjective understanding of their health within any approach to define or classify physical health and drew attention to the need to explore social and psychological contributors to health (Engel, 1977). Attempts to move beyond a disease-focused model of health include well-known examinations of health indicators such as quality of life (e.g. Bowling, 1991), social support (e.g. Fiore et al., 1986; LaRocco et al., 1980), and social, physical, and mental functioning (Engel, 1977; Stewart and Ware, 1992; Ware, 1986). In the case of these variables, enough research through meta-analyses has been conducted to draw more significant conclusions regarding their relationships with health. For example, in their meta-analysis of 81 studies examining the link between social support and various health indicators, Uchino et al. (1996) reported that greater levels of social support were linked to better cardiovascular, endocrine, and immune system functions. These authors also were able to examine some inherent problems with studying social support and health (e.g. operationalization and measurement issues), and make specific recommendations to improve upon this area of research. Thus, with regard to several specific variables that would be considered within the positive psychological realm, the idea of positive health has been well developed but more generally, the field of positive health has been underdeveloped.

Historically the definition of health has been limited to the absence of disease or infirmity (Seligman, 2008) and positive psychological constructs are often overlooked. Many of the positive constructs associated with health have been examined in the context of disease, negative

health outcomes, or at-risk behaviors (e.g. Bech et al., 2003; Finkenauer and Rimé, 1998). Alternatively, the review article by Ryff and Singer (2000) called for a focus on how health is enhanced and optimized by biological, psychological, and social aspects of human functioning. The authors note that examining and promoting optimal health is the most proactive version of primary prevention, a cornerstone of health psychology. They describe a need for more research connecting the positive aspects of psychological and social influences to the neurobiological and behavioral elements of health.

Research has begun to demonstrate how positive and negative daily events and affective experiences constitute different dimensions of human experience, rather than representing two ends on the same continuum (Zautra et al., 2005). Positive emotions have been found to contribute independently from negative emotions to health-related variables in studies of cold virus susceptibility (Cohen et al., 2003), longevity in HIV-positive men (Moskowitz, 2003), and blood pressure recovery following stress (Tugade et al., 2004). Further, research has found that knowledge of one's negative health indicators (e.g. obesity, disability) does not provide information about the presence and nature of positive indicators (e.g. well-being) (Singer et al., 1998). In fact, the study of constructs such as post-traumatic growth and benefit-finding has demonstrated the presence of positive indicators in the midst of negative health experiences (e.g. Affleck and Tennen, 1996; Tedeschi and Calhoun, 1995). Despite this evidence, many investigations in health psychology claim to examine positive ends of the spectrum, such as well-being and adjustment, but operationalize these variables using negative indicators of mental health, such as depression and anxiety (e.g. Sirois et al., 2006). Thus, the field of health psychology would benefit from greater clarification of what constitutes positive health, which is likely qualitatively and quantitatively different than disease or infirmity.

The goal of this study was to perform an analysis of the content of major journals in

health psychology to (1) determine the extent to which health psychology researchers have begun to define what constitutes positive health, (2) establish a list of constructs related to positive health psychology, determining those that have been well established, and those that are in need of further delineation, and (3) provide future directions for the field of positive health psychology research.

## Method

### *Journal selection*

Since the focus of the content analysis was on positive psychological concepts published in the health psychology literature, we began by exploring which publications in health psychology would be appropriate to examine. We determined that it would be important to include journals that had a broad focus (i.e. not limited to a specific illness or topic area), a wide readership, and a high impact rating ( $> 1.0$ ) within the field of health psychology. Further, we included only journals that addressed the importance of psychological factors in physical health, and included within their scope an examination of a wide range of biopsychosocial factors that likely would include positive health variables. Based on these criteria, we decided to examine the *Journal of Health Psychology (JHP)*, *Health Psychology (HP)*, and the *International Journal of Behavioral Medicine (IJBM)*. The *Journal of Health Psychology* was first published in 1996 by SAGE and includes eight issues a year. With its impact rating of 1.686 according to the *Journal Citation Report*, this journal presents a broad health focus that reaches an international readership and its inclusion in this content analysis would offer information on how the international community incorporates positive health research. *Health Psychology* began publishing in 1982 by the American Psychological Association and is currently a bi-monthly issue. It includes research on psychosocial, sociocultural, and environmental factors in relation to prevention,

development, or treatment of disease, and has a high impact rating of 3.652 according to the *Journal Citation Report*. The *International Journal of Behavioral Medicine* began in 1994, publishes four issues yearly by Springer, and has an impact rating of 1.437. JHP is published by a British company, HP is published by an American publishing company, and the IJBM is the official publication of the International Society of Behavioral Medicine. Collectively, these three journals ensure an international perspective on positive health is represented. Further, an initial search revealed that each journal has published at least one positive psychology article and the *International Journal of Behavioral Medicine* devoted its 2005, volume 12 to exploring positive psychology variables. Journals such as the *British Journal of Health Psychology* and the *Journal of Behavioral Medicine* were excluded because an initial search for the term 'positive psychology' in these two journals failed to yield any results. Additionally, a balance in place of publication was sought so as to avoid over-representing health psychology research published in one geographic location (e.g. United States). In short, all three include a broad readership in health and psychological professions and aim to investigate the interaction of psychological and physical health.

### *Search term selection*

We began the selection of relevant search terms of positive psychology constructs by consulting Lopez et al. (2006), which included a content analysis of positive psychology terms in leading counseling psychology journals. From the list that was generated by these authors, we chose the terms most relevant to health psychology, which included 21 of the 35 terms. The excluded terms were those that were redundant or were too general to be operationalized in health psychology research. For instance, rather than use 'achievement motivation' and 'motivation', only the term 'motivation' was selected. The terms 'positive mental

health', 'general strengths', and 'optimal human functioning' were deemed too broad to be operationalized in isolation from other search terms that were selected; it was assumed that articles that might include these general positive terms would also incorporate another positive construct that was selected in the current study. After selecting the most relevant variables from the list generated by Lopez et al. (2006), we then scanned multiple sources relevant to positive and health psychology, including Seligman's (2008) review of positive psychology, the *Handbook of Positive Psychology* (Snyder and Lopez, 2005), the *Comprehensive Handbook of Clinical Health Psychology* (Boyer and Pahlaria, 2007), the Values in Action Strengths Inventory (Peterson and Seligman, 2004), and a random selection of journal articles in the *Journal of Positive Psychology* and *Journal of Happiness Studies*. From these additional inquiries, we added 31 terms, resulting in 52 constructs total (see Table 1).

Once the constructs were determined, in August 2008 a search was conducted in the PsycInfo database for the three journals using truncated versions of the search terms so as not to miss different variations of the same word (e.g. 'cop' would include 'coping' as well as 'cope'). This search resulted in 1565 articles that included the constructs of interest between the three journals. As some of the articles included multiple positive constructs, the same articles appeared more than once in the initial search. After closely examining the pool of articles for duplicates, the final number of articles reviewed was 1367 out of a possible 3789 articles published.

### *Procedure: coding and analysis*

The data coding consisted of a two phase process. First, the two primary researchers examined a sample of 50 articles from the initial search independent of one another. They reviewed the title, abstract, and method of the 1367 articles to determine if the article could be considered to have a focus on human strengths

and optimal functioning. The articles that were eliminated mentioned one of the terms that were included in the search, but the positive construct was not considered as an operationalized variable or was not discussed substantively, or it was operationalized from a standpoint of dysfunction (e.g. a study mentioning 'adjustment' in its title, but actually measures sleep disturbance, depressive symptoms, or other dysfunctional behavior). Then, the two researchers compared their determinations for agreement. The researchers met after reviewing 25 articles at a time to determine if they were reaching agreement on whether to include the article in the next phase of analysis. All articles that had disagreement were discussed until consensus was reached. This process expanded to include two additional researchers who were trained in the procedure by the two primary researchers. Once training of all raters was complete, articles were reviewed and discussed in batches of 50. Teams of raters were rotated to reduce rater drift. Again, when raters disagreed about the article's focus initially, they discussed it until consensus was reached. The inter-rater agreement, or Kappa coefficient, for the independent ratings before discussion among the raters for the first phase of analysis was 0.62, indicating substantial agreement (Landis and Koch, 1977). Through discussion, the raters came to agreement for 100 percent of the articles. Of the 1367 articles reviewed in the first phase of analysis, 313 articles were identified as being positive in nature and were included in the second round of analysis.

Following the procedure outlined by Lopez et al. (2006), the second phase of analysis included a team of four researchers working in pairs of two to review the full text of all 313 articles identified in the first phase of the analysis to have exhibited a positive focus. Articles were identified to fit into one of two categories: (1) at least one positive psychological construct was the main focus of the article, or (2) positive psychological constructs were measured or examined in the article, but were not the primary focus. As an example of articles assigned

**Table 1.** Positive constructs investigated in JHP, HP, and IJBM

Positive construct/process	Category 1 (114 articles)		Category 2 (199 articles)		Total 313 articles	
	N	%	N	%	N	%
Adaptation	24	21.1	41	20.6	65	20.8
Adjustment	40	35.1	43	37.7	83	26.5
Altruism	0	0	0	0	0	0
Appraisal	19	16.7	35	17.6	54	17.3
Authenticity	0	0	1	.5	1	.3
Benefit-finding	23	20.2	7	3.5	30	9.6
Body image (positive)	4	3.5	13	6.5	17	5.4
Compassion	0	0	4	2.0	4	1.3
Competence	10	8.8	14	7.0	24	7.7
Coping	68	59.6	92	46.2	160	51.1
Courage	1	.9	0	0	1	.3
Creativity	3	2.6	0	0	3	1.0
Curiosity	5	4.4	0	0	5	1.6
Emotion-focused coping	10	8.8	17	8.5	27	8.6
Emotional creativity	1	.9	0	0	1	.3
Emotional expression	15	13.2	9	4.5	24	7.7
Empathy	6	5.3	4	2.0	10	3.2
Engagement	8	7.0	4	2.0	12	3.8
Flow	1	.9	0	0	1	.3
Forgiveness	2	1.8	0	0	2	.6
Goal/goal setting	23	20.0	36	18.1	59	18.8
Happiness	13	11.4	9	4.5	24	7.7
Hope	21	18.4	4	2.0	25	8.0
Humility	1	.9	0	0	1	.3
Humor	5	4.4	6	3.0	11	3.5
Leadership	0	0	0	0	0	0
Life meaning/meaning in life	24	21.1	5	2.5	29	9.3
Life satisfaction	29	25.4	15	7.5	44	14.1
Locus-of-control	34	29.8	58	29.1	92	29.4
Love	7	6.1	1	.5	8	2.6
Mindfulness	1	.9	1	.5	2	.6
Motivation (intrinsic, for self-management, etc.)	17	14.9	49	24.6	66	21.1
Optimism	37	32.5	17	8.5	54	17.3
Positive affect	54	47.4	32	16.1	86	27.5
Problem-solving coping	14	12.3	18	9.1	32	10.2
Purpose in life/life purpose	22	19.3	5	2.5	27	8.6
Quality of life	50	43.9	54	27.1	104	33.2
Religiosity/religion	28	24.6	20	10.1	48	15.3
Resilience	10	8.8	9	4.5	19	6.1
Satisfaction (e.g. work, relationships)	30	26.3	23	11.6	53	16.9
Savoring	0	0	0	0	0	0
Self-compassion	0	0	0	0	0	0
Self-efficacy	34	29.8	79	39.7	113	36.1
Self-esteem	34	29.8	35	17.6	69	22.0
Self-management/self-monitoring/self-regulation	20	17.5	45	22.6	65	20.8
Social support	71	62.3	103	51.8	174	55.6
Spirituality	36	31.6	9	4.5	45	14.4
Treatment adherence	21	18.4	49	24.6	70	22.4
Vigor	11	9.7	2	1.0	13	4.2

**Table 1.** (Continued)

Positive construct/process	Category 1 (114 articles)		Category 2 (199 articles)		Total 313 articles	
	N	%	N	%	N	%
Well-being	75	65.8	74	37.2	149	47.6
Wellness	4	3.5	1	.5	5	1.6
Wisdom	4	3.5	1	.5	5	1.6

Note: Category 1 = The article has one of the positive constructs as its main focus (i.e. the article clearly operationalizes or measures one of the positive constructs). Category 2 = The article has some other topic as its main focus but includes the positive construct in the article or the statistical analysis, or the article examines the general topic of the positive construct

to each category, consider two hypothetical articles that both studied social support. A study that examined how large social support networks relate to enhanced perceptions of physical health was considered overtly positive, and therefore rated a '1', while a study that examined social support's role in the link between stress and depression was rated a '2', as the primary focus of the study was on dysfunction. We chose to eliminate the third category proposed by Lopez et al. (2006) (i.e. article mentions positive psychological constructs but does not discuss them substantively or does not use them as part of the analysis) as these articles would have been eliminated in our first phase of analysis.

In this second phase, each of the 313 articles was read independently in its entirety by a team of two researchers and categorized as a 1 or a 2, as described above. Articles were reviewed in batches of 22–23 at a time, and each team of two raters discussed any disagreements until consensus was reached. The composition of the rating teams rotated so as to reduce drift toward agreement. If initial consensus could not be reached by the team of two, all four raters (i.e. both teams of two) read the full text of the article independently and then rated it. These ratings were then discussed until consensus was reached to ensure that all four raters agreed on the categorization of these articles. The four raters used this discussion to refine further the category definitions to ensure that the delineation between

a rating of '1' and of '2' was clear. The Kappa coefficient for the phase of independent analysis before the teams of two raters discussed their ratings was 0.56, indicating moderate agreement without discussion (Landis and Koch, 1977). In addition to categorizing articles as having the primary focus on a positive construct, or secondary to another focus, raters also coded articles for research design employed (i.e. qualitative, quantitative), type of population studied (i.e. healthy, patient, caregiver, more than one population), type of illness, age range of population, and whether disparities in health care and promotion were addressed. Finally, raters identified all constructs from the list of terms generated that were mentioned in the article (excluding when the term was used in a different tense or context, e.g. 'we hope', 'values were adjusted'). All terms that were mentioned, rather than exclusively those that were measured, were included in the final tallies. Information regarding the journal and year of publication was also noted.

## Results and discussion

In this content analysis, slightly more than one-third of the articles in the selected three health psychology journals at least mentioned one of the positive constructs identified by the researchers. However, upon closer examination, only 3 percent had an overt focus on positive constructs. The results of each phase of

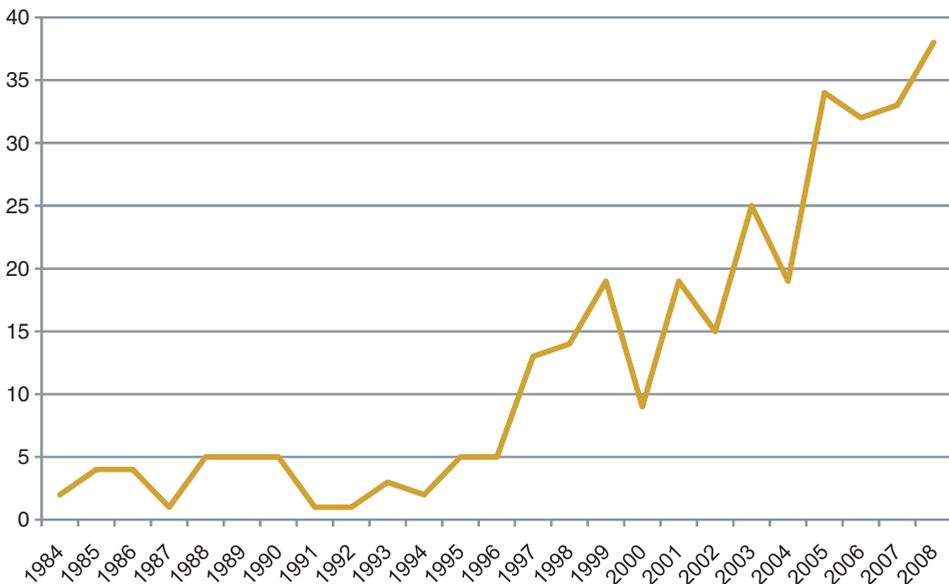
analysis shed light onto the attention already given to positive constructs in health psychology research, and illuminated constructs from positive psychology yet to be incorporated into health psychology research.

In the first phase of the analysis, the search for the positive constructs identified by the researchers in the *Journal of Health Psychology* (JHP), *Health Psychology* (HP), and the *International Journal of Behavioral Medicine* (IJBM) resulted in 1367 articles out of a possible 3789 published articles in these three journals. Thus, of all articles published since each journal's inception, 36.1 percent included at least one positive construct (either measured or mentioned). After the team of researchers reviewed these articles, 313 were identified as having a positive psychological construct as either the primary or secondary focus of the article. Thus 313 of the 1367 (22.9%) investigated a positive construct, representing 8.2 percent of the total number of articles published by the three journals ( $N = 3789$ ).

The second round of the analysis included a more in-depth look at the 313 articles identified

as positive in nature. Of these articles, the researchers found that 114 focused on positive psychological constructs primarily, while 199 focused on positive constructs as a secondary emphasis. Only 3.01 percent of all articles published in JHP, HP, and IJBM had an overt focus on positive psychological constructs since their inception. Many of the studies published in these journals included variables considered to be related to or derived from positive psychology, but they were most often studied in the context of negative effects, ill health, problematic behaviors, or dysfunction.

Of the 313 articles included in the second round of analysis, 88 percent of these were published after 1996 (see Figure 1). Between the publishing years of 1996–2000 and 2001–2005, there was a 227 percent increase in the number of articles that examined constructs related to optimizing human functioning, with that number remaining high for the subsequent publishing years to the present. Thus, it is clear that health psychologists are committed to growth in this area and are on the path toward understanding the variables that are most important for optimal health.



**Figure 1.** Number of journal articles published in JHP, HP, and IJBM with a positive focus by year.

The variables from the list of positive constructs that were most frequently cited in articles included social support (174 articles), coping (160 articles), well-being (149 articles), self-efficacy (113 articles), quality of life (104 articles), locus of control (92 articles), positive affect (86 articles), adjustment (83 articles), treatment adherence (70 articles), and self-esteem (69 articles) (see Table 1). Some of the constructs identified were not included in any article (i.e. altruism, leadership, savoring, and self-compassion), some in only one article (i.e. authenticity, courage, flow, and humility), and a couple in only two articles (i.e. forgiveness and mindfulness).

Social support, coping, well-being, self-efficacy, and quality of life are among the constructs that have been examined to a greater extent in health psychology, contributing to our understanding of how they play a role in enhanced health. Reviews on the relation between social support and health (Uchino et al., 1996), coping and mental and physical health (Penley et al., 2002), and self-efficacy and health (Holden, 1991) establish that such positive psychological constructs are relevant to understanding physical health and research should continue to examine the roles they play. Additionally, quality of life and well-being for specific populations (e.g. cancer patients) have received much empirical attention in an attempt to delineate their relevance and meaning for different groups of people (Pinquart and Fröhlich, 2009; Rehse and Pukrop, 2003; Smith et al., 1999). Although there is a long history of examining social support, coping, well-being, self-efficacy, and quality of life within the health psychology literature, these terms were often studied in relation to negative mental and physical health outcomes, and studies examining the constructs in this way were excluded after the first round of analysis. Variables such as well-being and adjustment were often operationalized as the extent to which one experienced negative psychological or physical symptoms (e.g. depression, anxiety, hostility, pain, fatigue) rather than healthy aspects of functioning. Thus, certain well-researched constructs appear initially to examine positive aspects of

functioning, but upon closer inspection, are more representative of investigation into illness as opposed to optimal health. Future research should clarify how social support, coping, well-being, self-efficacy, and quality of life contribute to health above and beyond the mere absence of disease.

In the second round of analysis, studies that examined certain constructs, such as optimism, positive affect, benefit-finding, hope, and life meaning, were more often cast in an overtly positive frame, as evidenced by their higher percentages in the first category of analysis (i.e. the article clearly operationalizes or measures one of the positive constructs; see Table 1). Variables such as self-efficacy, motivation, and treatment adherence had the opposite trend, demonstrating higher representation in the second category which included articles that examined positive constructs, but did not have a primary focus in positive health psychology. Therefore, the study of constructs such as optimism, positive affect, benefit-finding, hope, and life meaning are leading the development of the field of positive health.

Some constructs remain relatively unexamined with regard to their role in health psychology. For instance, self-compassion is a construct that is beginning to be examined within psychology (Neff, 2003) but little is known about its application to health psychology. Several studies have examined self-compassion alongside psychological and physiological indicators of stress as outcomes of mindful meditation interventions (e.g. Chiesa and Serretti, 2009; Smith, 2010), and it is likely that self-compassion has a positive impact on enhancing health through stress reduction, though this link has not been the focus of empirical study. Similarly, other variables that have been examined in the field of positive psychology, such as altruism and courage, might also have relevance for health promotion, making it ripe for examination by health psychology researchers. For instance, Post (2005) summarizes research linking altruism to longevity, reduced risk for mortality, and better physical health, concluding that altruism results in

improved mental and physical health. The field of positive health psychology would benefit from examining a wider range of constructs that illuminate personal strengths and how they impact our physical health. Further, health psychology can be enhanced by borrowing ideas from positive psychology research, where the effects of variables such as gratitude have been shown to relate to greater psychological well-being (Wood et al., 2009), and thus, the link to physical well-being appears logical, but has not been investigated. The field of positive psychology is growing rapidly, and more research is needed on how positive psychological health relates to positive physical health.

While the idea of expanding on various positive psychological constructs in the health literature is exciting, we also need to build upon the areas that have received a great deal of attention. Recent critics of empiricism in positive psychology point to how little we actually understand about the variables of greatest interest to researchers and the public alike. For example, Coyne and Tennen (2010) discuss how claims regarding benefit-finding in the face of a cancer diagnosis have been vastly overstated, given conflicting research findings and difficulties in defining benefit-finding as a construct. They call on researchers in positive psychology to use restraint in their claims and spend more time in developing and defining the variables of interest. More attention needs to be focused on developing instruments that accurately define and measure the constructs of interest. While social support has over 30 years of scale development under its belt (Sarason and Sarason, 2006), constructs such as self-compassion are just beginning to be defined (Neff, 2003), and benefit-finding, which has garnered much attention in the research literature and popular press, is plagued with problems related to definition and measurement (Lechner et al., 2009). Taking a step back even further, to expanding on the theoretical development of positive health, is also necessary (Coyne and Tennen, 2010). Seligman (2008) described the strong connections, both theoretical and empirical, found between positive psychological constructs (over

and above the absence of mental illness) and enhanced well-being, life satisfaction, and decreased incidence of mental disorders. The link between positive psychology and enhanced psychological health lays a strong theoretical groundwork for its links to physical health, which has begun to be supported by empirical literature, mostly within the past decade. The overarching theory that subjective well-being can promote physical health is in its infancy, however, and needs further elaboration. Thus, it will be useful for scientists embarking on the development of the field of positive health to carefully examine what we think to be true, what we know to be true, and what needs further definition and understanding before making claims about the links between specific psychological variables and their relationship to physical health.

In the present study, the researchers gathered further information regarding populations and health status of participants in the studies included in the second round of the analysis. Of the 313 studies identified to have a positive psychological construct as either the primary or secondary focus, 40.3 percent included healthy individuals, 47.6 percent specified a medical condition of participants (i.e. patients), 3.5 percent studied caregivers, 5.8 percent included both patients and caregivers, 1.6 percent included healthy individuals and patients, and 1.3 percent included healthy individuals and caregivers. Further, 42.5 percent of studies included participants with no stated health diagnosis (i.e. presumed to be healthy), while 16 percent studied patients diagnosed with cancer, 8 percent with heart disease, 4.8 percent diabetes, 4.8 percent HIV/AIDS, 3.8 percent autoimmune disorders (e.g. arthritis), 2.6 percent multiple sclerosis, 0.3 percent obesity, 0.3 percent Parkinson's disease, 10.9 percent some other diagnosis, and 6.1 percent included participants with multiple health diagnoses. Additionally, the age groups of individuals studied included 48.6 percent between 18 and 65 years, 33.5 percent included over 18 (including over 65), 6.7 percent only over 65, 6.1 percent under 18, and 4.8 percent included children and

adults (0–65 years). Finally, 15 percent of the articles in the second round of analysis included some examination of disparities in health care and dissemination of resources (e.g. differential effects of social support for individuals with low and high income, nutritional programs in low-income communities, etc.). No other content analysis or meta-analysis of health psychology research could be located that reported similar statistics in terms of population (e.g. medical condition), age, and health disparities. As we move forward in the development of the field of positive health, understanding the populations that have historically been examined within this framework will help to frame the types of questions to be investigated.

The balance between studying healthy populations and individuals with a medically diagnosed disease, impairment, or disability is one area of strength within health psychology. Slightly less than half (42.5%) of the studies that were considered to have a positive psychological focus studied healthy populations, with a slight majority focusing on individuals with a diagnosis. Equally important to learning how to enhance health in the context of illness is understanding what contributes to optimal health for individuals without diagnoses. Although a multitude of studies have examined healthy populations, many remain focused on the experience of deficits, such as responses to stress (Park and Adler, 2003), potential health deterioration (Uchino et al., 1995), unhealthy behaviors (e.g. cigarette use; Swaim et al., 1996), and adaptation to negative events (Damschroder et al., 2008). Far fewer have examined how healthy individuals enhance or optimize their functioning. In maintaining this balance, all individuals, regardless of baseline health, will benefit from programs aimed at optimizing human health.

Although not a primary focus of this study, one finding worth pointing out was the relatively small number of studies that addressed health disparities within a positive psychological framework. Focusing on enhancement could be particularly relevant for populations that are underserved or otherwise marginalized, as it is

usually within these communities that there exists great resilience and growth. Recently, the Prevention Institute developed the community assessment tool THRIVE, a toolkit for health and resilience in vulnerable environments, to help remedy health disparities and promote community resilience among racial and ethnic minorities (Davis et al., 2005). Positive health could contribute to the study of health disparities by drawing attention to the strengths of underserved communities rather than focusing on deficits, thereby working toward eliminating disparities through community enhancement.

### *Limitations*

This analysis provides an examination of how the field of positive health psychology has begun to be developed, and sheds light on some of the difficulties present in this emerging field. In embarking on this project, it quickly became clear that health enhancement and optimization are difficult to define and more is needed to clarify what it means to be functioning at the level of optimal health. The moderate kappa values reflected the difficulty in refining the definition of positive health, and represent one limitation in this study. Although the researchers engaged in frequent discussions of what constitutes positive health, it was still difficult to achieve greater agreement. To further delineate what is meant by positive health, in this examination, only the most overtly positive constructs or behaviors were included. To have a positive focus, a study would need to examine variables that were considered indicators of healthy functioning, and these positive variables would need to be measured in a positive direction. We discovered that many studies discuss well-being, adjustment, and even happiness, but define these terms as the absence of mental and physical health problems. Similarly, another difficulty that arose with regard to what constitutes optimal health was how to categorize health behaviors. Is the reduction or cessation of an unhealthy behavior (e.g. smoking) an indicator of enhancement, or does one need to

increase healthy behaviors (e.g. exercise) to be considered moving toward optimization? For the purpose of this study, only the studies that focused on the most enhancing behaviors were included. These difficulties seem parallel to the problems that currently exist in the development of the field of positive health, and give more credence to the necessity of defining the field both theoretically and empirically before making claims of its significance.

Finally, although multiple precautions were taken to avoid bias in determining which articles could be considered overtly positive in nature, at some level this could not be avoided. Rating the articles blind to the date of publication would have been preferred to illuminate the trends in the research, but the citations within the article made this prospect unachievable. In selecting the journals to review, the constructs included in the initial search, and the articles that would be considered to fall under the category of positive health psychology, the opinions and viewpoints of the researchers undoubtedly influenced the analysis. It is likely that the intersection of health and positive psychology occurs in numerous other places, such as journals related to clinical and counseling psychology, positive psychology, and other journals within the field of health psychology. Further, as we searched a finite list of constructs, it is possible that there are other variables to be considered overtly positive and relevant to the field of health psychology. Therefore, this study should be considered a glimpse into what has been done with regard to the emerging field of positive health, and a springboard for future development.

### Implications

Further development and definition of positive health psychology is necessary. Health psychologists should be challenged to push beyond defining health and happiness as the absence of disorders and disability. If a study is going to include overtly positive constructs, these constructs should be operationalized and measured

as such. Researchers should be mindful of the questions that they are asking and how to define optimization in the field of health psychology. Further, there is an entire pool of constructs within positive psychology that are virtually untapped by research in this area. Some may be more relevant than others, but it will require research to determine which relate most significantly to optimizing health. The content analysis presented here provides a framework for areas that are leading the charge in the development of this field, while highlighting others that would benefit from further examination.

### Competing Interests

None declared.

### References

- Affleck G and Tennen H (1996) Constructing Benefits from Adversity: Adaptational Significance and Dispositional Underpinnings. *Journal of Personality* 64(4): 899–922.
- Aspinwall LG and Tedeschi RG (2010) The Value of Positive Psychology for Health Psychology: Progress and Pitfalls in Examining the Relation of Positive Phenomena to Health. *Annals of Behavioral Medicine* 39(1): 4–15.
- Bech P, Olsen LR, Kjoller M, and Rasmussen NK (2003) Measuring Well-Being Rather Than the Absence of Distress Symptoms: A Comparison of the SF-36 Mental Health Subscale and the WHO-Five Well-Being Scale. *International Journal of Methods in Psychiatric Research* 12(2): 85–91.
- Bowling A (1991) *Measuring Health: A Review of Quality of Life Measurement Scales*. Bristol, PA: Open University Press.
- Boyer BA and Pahlaria MI (eds) (2007) *Comprehensive Handbook of Clinical Health Psychology*. New York: John Wiley & Sons.
- Cassell J (1976) The Contribution of the Social Environment to Host Resistance. *American Journal of Epidemiology* 104(2): 107–123.
- Chiesa A and Serretti A (2009) Mindfulness-Based Stress Reduction for Stress Management in Healthy People: A Review and Meta-Analysis. *Journal of Alternative and Complementary Medicine* 15(5): 593–600.

- Cobb S (1976) Social Support as a Moderator of Life Stress. *Psychosomatic Medicine* 38(4): 300–314.
- Cohen S, Doyle WJ, Turner RB, Alper CM, and Skoner DP (2003) Emotional Style and Susceptibility to the Common Cold. *Psychosomatic Medicine* 65(4): 652–657.
- Coyne JC and Tennen H (2010) Positive Psychology in Cancer Care: Bad Science, Exaggerated Claims, and Unproven Medicine. *Annals of Behavioral Medicine* 39(1): 16–26.
- Damschroder LJ, Zikmund-Fisher BJ, and Ubel PA (2008) Considering Adaptation in Preference Elicitations. *Health Psychology* 27(3): 394–399.
- Davis R, Cook D, and Cohen L (2005) A Community Resilience Approach to Reducing Ethnic and Racial Disparities in Health. *American Journal of Public Health* 95(12): 2168–2173.
- Edwards LM and Pedrotti JT (2008) A Content and Methodological Review of Articles Concerning Multiracial Issues in Six Major Counseling Journals. *Journal of Counseling Psychology* 55(3): 411–418.
- Engel GL (1977) The Need for a New Medical Model: A Challenge for Biomedicine. *Science* 196(4286): 129–136.
- Fave AD (2006) The Impact of Subjective Experience on the Quality of Life: A Central Issue for Health Professionals. In: Csikszentmihalyi M, Csikszentmihalyi IS (eds) *A Life Worth Living*. New York: Oxford University Press, 165–181.
- Finkenauer C and Rimé B (1998) Keeping Emotional Memories Secret: Health and Subjective Well-Being When Emotions Are Not Shared. *Journal of Health Psychology* 3(1): 47–58.
- Fiore J, Coppel DB, Becker J, and Cox GB (1986) Social Support as a Multifaceted Concept: Examination of Important Dimensions for Adjustment. *American Journal of Community Psychology* 14(1): 93–111.
- Fitzpatrick R (2000) Measurement Issues in Health-Related Quality of Life: Challenges for Health Psychology. *Psychology and Health* 15(1): 99–108.
- Fredrickson BL and Losada MF (2005) Positive Affect and the Complex Dynamics of Human Flourishing. *American Psychologist* 60(7): 678–686.
- Holden G (1991) The Relationship of Self-Efficacy Appraisals to Subsequent Health Related Outcomes: A Meta-Analysis. *Social Work in Health Care* 16(1): 53–93.
- Landis J and Koch G (1977) The Measurement of Observer Agreement for Categorical Data. *Biometrics* 33(1): 159–174.
- LaRocco JM, House JS, and French JR (1980) Social Support, Occupational Stress, and Health. *Journal of Health and Social Behavior* 21(3): 202–218.
- Lechner SC, Tennen H, and Affleck G (2009) Benefit Finding and Growth. In: Lopez S, Snyder CR (eds) *Oxford Handbook of Positive Psychology*. New York: Oxford University Press, 633–640.
- Lopez SJ, Magyar-Moe JL, Petersen SE, et al. (2006) Counseling Psychology's Focus on Positive Aspects of Human Functioning. *Counseling Psychologist* 34(2): 205–227.
- Moskowitz JT (2003) Positive Affect Predicts Lower Risk of AIDS Mortality. *Psychosomatic Medicine* 65(4): 620–626.
- Neff KD (2003) The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity* 2(3): 223–250.
- Park CL and Adler NE (2003) Coping Style as a Predictor of Health and Well-Being across the First Year of Medical School. *Health Psychology* 22(6): 627–631.
- Penley JA, Tomaka J, and Wiebe JS (2002) The Association of Coping to Physical and Psychological Health Outcomes: A Meta-Analytic Review. *Journal of Behavioral Medicine* 25(6): 551–603.
- Peterson C (2009) Foreword. In: Lopez S, Snyder CR (eds) *Oxford Handbook of Positive Psychology*. New York: Oxford University Press, xxiii–xxiv.
- Peterson C and Seligman MEP (2004) *Character Strengths and Virtues: A Handbook and Classification*. New York: Oxford University Press; Washington, DC: American Psychological Association.
- Pinquart M and Fröhlich C (2009) Psychosocial Resources and Subjective Well-Being of Cancer Patients. *Psychology & Health* 24(4): 407–421.

- Post SG (2005) Altruism, Happiness, and Health: It's Good to Be Good. *International Journal of Behavioral Medicine* 12(2): 66–77.
- Rehse B and Pukrop R (2003) Effects of Psychosocial Interventions on Quality of Life in Adult Cancer Patients: Meta Analysis of 37 Published Controlled Outcome Studies. *Patient Education and Counseling* 50(2): 179–186.
- Ryff CD and Singer B (2000) Biopsychosocial Challenges of the New Millennium. *Psychotherapy and Psychosomatic Medicine* 69(4): 170–177.
- Sarason BR and Sarason IG (2006) Close Relationships and Social Support: Implications for the Measurement of Social Support. In: Vangelisti AL, Perlman D (eds) *The Cambridge Handbook of Personal Relationships*. New York: Cambridge University Press, 429–443.
- Seligman MEP (2008) Positive Health. *Applied Psychology: An International Review* 57(s1): 3–18.
- Seligman MEP (2009) Positive Psychology, Positive Prevention, and Positive Therapy. In: Synder CR, Lopez SJ (eds) *Handbook of Positive Psychology*. New York: Oxford University Press, 3–12.
- Seligman MEP and Csikszentmihalyi M (2000) Positive Psychology: An Introduction. *American Psychologist* 55(1): 5–14.
- Singer B, Ryff CD, Carr D, and Magee WJ (1998) Life Histories and Mental Health: A Person-Centered Strategy. In: Raftery A (ed.) *Sociological Methodology*. Washington, DC: American Sociological Association, 1–51.
- Sirois FM, Davis CG, and Morgan MS (2006) 'Learning to Live with What You Can't Rise Above': Control Beliefs, Symptom Control, and Adjustment to Tinnitus. *Health Psychology* 25(1): 119–123.
- Smith JD (2010) Mindfulness-Based Stress Reduction (MBSR) for Women with PTSD Surviving Domestic Violence. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 70(8-B): 5186.
- Smith KW, Avis NE, and Assmann SF (1999) Distinguishing between Quality of Life and Health Status in Quality of Life Research: A Meta-Analysis. *Quality of Life Research* 8(5): 447–459.
- Snyder CR and Lopez SJ (eds) (2005) *Handbook of Positive Psychology*. New York: Oxford University Press.
- Stewart AL and Ware JE (eds) (1992) *Measuring Functioning and Well-Being: The Medical Outcomes Study Approach*. Durham, NC: Duke University Press.
- Swaim RC, Oetting ER, and Casas JM (1996) Cigarette Use among Migrant and Non-Migrant Mexican-American Youth: A Socialization Latent Variable Model. *Health Psychology* 15(4): 269–281.
- Tedeschi RG and Calhoun LG (1995) *Trauma and Transformation: Growing in the Aftermath of Suffering*. Los Angeles, CA: SAGE.
- Tugade MM, Fredrickson BL, and Feldman-Barrett L (2004) Psychological Resilience and Positive Emotional Granularity: Examining the Benefits of Positive Emotions on Emotion Regulation and Health. *Journal of Personality* 72(6): 1161–1190.
- Uchino BN, Cacioppo JT, and Kiecolt-Glaser JK (1996) The Relationship between Social Support and Physiological Processes: A Review with Emphasis on Underlying Mechanisms and Implications for Health. *Psychological Bulletin* 119(3): 488–531.
- Uchino BN, Cacioppo JT, Malarkey W, Glaser R, and Kiecolt-Glaser JK (1995) Appraisal Support Predicts Age-Related Differences in Cardiovascular Function in Women. *Health Psychology* 14(6): 556–562.
- Ware JE (1986) The Assessment of Health Status. In: Aiken LH, Mechanic D (eds) *Applications of Social Science to Clinical Medicine and Health Policy*. New Brunswick, NJ: Rutgers University Press, 204–228.
- Wood AM, Joseph S, and Maltby J (2009) Gratitude Predicts Psychological Well-Being Above the Big-Five Facets. *Personality and Individual Differences* 46(4): 443–447.
- World Health Organization (1946) *Preamble to the Constitution of the Official Records of the World Health Organization*. Official Records of the World Health Organization, no. 2.
- Zautra AJ, Affleck GG, Tennen H, Reich JW, and Davis MC (2005) Dynamic Approaches to Emotions and Stress in Everyday Life: Bolger and Zuckerman Reloaded with Positive as Well as Negative Affects. *Journal of Personality* 73(6): 1511–1538.