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The Relationship of Optimism With Psychological and Physical Well-Being

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### Abstract

The relationship of optimism with psychological and physical well-being is a well researched topic. Maintaining an optimistic view on life has been shown to reduce depression and help with the recovery process from major surgery. Other daily life events (i.e., job performance) have been found to be positively related to high levels of optimism. The literature on optimism also provides information on ways to measure optimism and distinguishes between the different theoretical constructs used to define optimism. Throughout this review, these topics, as well as other important issues related to optimism will be discussed in great detail. It is hoped that by reading this review, the reader will become appreciative of the powerful benefits of maintaining a positive outlook on life.

## The Relationship of Optimism With Psychological and Physical Well-Being

### *General Overview*

Optimism is the belief that future events will have positive outcomes. Optimism has been linked to various aspects of psychological and physical well-being in adults (Lai, 1995; Schweizer, Beck-Seyffer, & Schneider, 1999). The study of optimism has its roots in the field of health psychology and much of what is known about optimism is due to its early study in this field (Scheier, Carver, & Bridges, 2000). The beneficial effects of optimism and positive coping skills have been shown to enhance one's ability to deal with stress and depression (Gillham & Seligman, 1999). Seligman (1998) reported that optimistic people experience less depression and increased enjoyment in social interactions. This is due to their ability to expect positive future outcomes based on positive past experiences. Positive relationships have also been found between optimism, hope, and health (Scioli et al., 1997).

The purpose of the current literature review is to discuss the relationship optimism has with various psychological (i.e., depression) and physical factors (i.e., preventing or recovering from an illness). This review of the literature on optimism attempts to demonstrate that optimism plays a key role in preventing or managing various psychological and physical conditions or diseases. The literature reviewed in this paper is a general overview that introduces the reader to the powerful strengths of optimistic thinking. Sources reviewed for this paper include scholarly journals, books, and websites.

The first part of this review will focus on how optimism is defined and studied, the development of optimistic thinking (biological and environmental), and the differences between

unrealistic optimism and dispositional optimism.

The second part of the review will focus on the specific ways optimism influences psychological and physical well-being. The specific topics under psychological well-being include quality of life, coping styles, depression and schizophrenia. In terms of optimism and physical well-being, specific topics include coping with cancer, recovery from surgery, and physical illnesses. Finally, optimism and specific topics including: children and adolescents, job performance, friendship, and sports will be discussed. The review will conclude with research on effective ways to change negative thinking (pessimism).

### *Views of Optimism*

There are currently two main views of optimism, “the explanatory style” and “the dispositional optimism view,” also known as “the direct belief view.” The dispositional or direct belief view are used interchangeably in the literature as well as in this review. Also, much of the research on the dispositional and explanatory views overlap and many studies do not specify what specific style is being used as the theoretical framework for conducting the research. Therefore, some of the studies described will not specify the view on which the research is based on. This lack of distinction appears to be a problem with the optimism literature. At times it is difficult to determine exactly what view is being used as a foundation for a particular study. The development of the field of positive psychology may help to better distinguish the various constructs of optimism. The field of positive psychology will be discussed briefly, but will not be a major focus of this review.

### *Explanatory Style*

The first view seeks to determine people's beliefs based on past experiences and is considered a more indirect approach to studying optimism. This view is based on a

person's attributional style (Scheier, Carver, & Bridges, 2000). Attributional styles are formed by the way we perceive or explain past life experiences. If these perceptions or explanations are negative and held onto we will then expect negative outcomes for future events. A sense of helplessness takes over and we believe we are unable to change our viewpoint of the world. Attributional styles typically are measured through the use of the Attributional Style Questionnaire (ASQ). The ASQ has individuals respond to what they believe are the causes to different life scenarios. Their responses are rated based on their perceptions of the causes (i.e., internal vs. external, stable vs. unstable, global vs. specific) (Seligman, 1998). The ASQ will be examined later in greater detail. The benefit to examining optimism through the use of this model is that the negative attributions can be identified and changed through therapy if necessary. Negative attributions can be reversed through various cognitive and/or behavioral methods (Gillham & Seligman, 1999). The problem with the use of attributional theory in understanding optimism is that it can be very complex and is subjectively based on self-report of past experiences (Scheier et al., 2000).

As described above, explanatory style is the way people determine the outlook of his/her life based on past experiences. People who believe these past experiences were positive and that negative memories were out of their control (external factors) are said to have a positive explanatory style or are optimistic. In comparison, those who blame themselves for misfortunes (internal factors) and believe they will never amount to anything are said to have negative explanatory style or are pessimistic.

Seligman (1998) believes there are three major factors that determine what a person's explanatory style is: permanence, pervasiveness, and personalization.

The idea of permanence is that people believe they are the cause of negative events and

the bad experiences will always be with them. Their views are pessimistic in nature. For example: "I'm all washed up;" "Diets never work;" and, "You always nag." Temporary, non-permanent (optimistic) styles of thinking are opposite of the above phrases, such as "I'm exhausted;" "Diets don't work when you eat out;" and, "You nag when I don't clean my room." As stated, the way we interpret and cope with life events determines the way we let them interfere with our functioning. Speaking in terms of "sometimes" and "under certain conditions" is healthier than using phrases such as "always" and "forever" (Seligman, 1998, p. 44).

The second type of defining a person's explanatory style as described by Seligman is pervasiveness. Pervasiveness (specific vs. universal) is based on the way people allow unfortunate circumstances to affect their entire lives. People who look at disappointment such as getting a bad grade in a class as being a total failure in everything they do are describing their misfortune in "universal" terms. On the other hand, people who get a bad grade and can isolate the bad grade to just that grade are said to be making a "specific" explanation of the event. The following examples of phrases better illustrates the distinction between universal and specific pervasiveness about life events. A universal or pessimistic viewpoint would be: "All teachers are unfair;" "I'm repulsive;" or "Books are useless." Specific or optimistic pervasiveness may be: "Professor Seligman is unfair;" "I'm repulsive to him;" or "This book is useless." As described, universal pervasiveness is very concrete with no room for distinctions between different life events or personal qualities. The specific pervasiveness style allows people to not explain things in black and white terms and view misfortunes as situation specific. Therefore, they are able to reinforce and enhance the positive qualities that they do have; even when they are faced with negative life events (Seligman, 1998, p. 47).

The third and final part of a person's explanatory style is personalization (internal vs.

external). Personalization deals with the way people describe the cause of bad events. They either blame themselves (internal), which causes low self-esteem, or they blame others (external), and tend to like themselves better. Specific examples of internal vs. external personalization are illustrated by the following phrases: Internal- "I'm stupid;" "I have no talent at poker;" or "I'm insecure;" External- "You're stupid;" "I have no luck at poker;" or "I grew up in poverty." Seligman cautions people to be careful when making external statements because it is easy to fool yourself into believing other people are the causes of bad events. This is especially true for people who are in denial or project their feelings of insecurity or apprehension about situations onto others. Having an external personalization style is healthy, as long as it is objective and truthful (Seligman, 1998, p. 50).

#### *Dispositional Optimism or Direct Belief Model*

This construct attempts to study optimism through the direct beliefs individuals have regarding future life events. This view is referred to in the literature as "dispositional optimism" or the "direct belief model." These direct beliefs are measured directly by using measures such as the Life Orientation Test-Revised (LOT-R; Carver, Scheier, & Bridges, 1994). This approach is more focused on optimistic beliefs about future events compared with the attributional theory, which looks to understand why people are optimistic or pessimistic and how they became this way. Its direct study of beliefs about optimism allows for optimism to be easily studied with other known variables that promote psychological and physical well-being (Scheier et al., 2000). However, only identifying the beliefs of optimism and not the cause does not allow for the origin of negative belief systems to be studied. Therefore, the use of an attributional style model appears to be a better way to understand why people are optimistic or pessimistic, while the direct belief model is more capable of just measuring if a person has an optimistic or pessimistic

view of future events.

### *Unrealistic Optimism*

As described above, optimism is the belief that future life event will have positive outcomes. Unrealistic optimism is the belief that nothing bad will happen because the person feels invincible to things such as accidents, diseases, etc. Although it appears a bit foolish to believe this way, research has found unrealistic optimism and optimism to be highly related in improving psychological and physical well-being. In their study of the relationship between optimism and unrealistic optimism, Davidson & Prkachin (1997) conducted two studies in which participants completed both the Life Orientation Test (LOT) and the Unrealistic Optimism Measure (UOM) and a lifestyle questionnaire with the main focus on exercise behaviors. Participants were assessed at the beginning of the semester and again at six weeks. At six weeks, they were only given the exercise questions.

Results showed that both optimism and unrealistic optimism were positively correlated. Also, those who were high in optimism but low in unrealistic optimism showed the greatest level of exercise over the six-week period. The overall finding for those high in unrealistic optimism was that they reported a lower risk of experiencing future health problems. The general criticism of unrealistic optimism is that these individuals may be negating or not actively participating in healthy behavior or activities.

Current research has described unrealistic optimism in ways that may allow for it to be more easily distinguished from optimism (Schneider, 2001). The general distinction in this literature attempts to determine if it is better to be optimistic or realistic. The concern is that people will tend to be in denial of their problems and therefore develop optimistic biases about the future. The goal for people is to have a balance between realistic and optimistic thinking or

realistic optimism. The research described on optimism and realistic thinking is a bit philosophical. On the one hand reality is being described as the way we move about the environment that increases our chances of success based on what we know. However, this knowledge is not foolproof and many other factors influence the decisions and outcomes we experience.

### *Realistic Optimism*

The combination of optimism and reality is realistic optimism. This view is based on the following three models which look at optimism in the past, present, and future (Schneider, 2001).

The first model is known as the "benefit of the doubt principle." This deals with the way people classify past experiences. These experiences can be judged in either a realistic or unrealistic way. For a person to identify the situation in a realistic way, they need to be aware of any circumstances or biases that may influence their thinking. For example, if someone gives a speech and evaluates the performance as good, there are a number of factors that may have influenced the ratings. If the person can give an objective rating of the performance, then he/she would be experiencing realistic optimism about the performance and other future speeches. However, if the person develops biases about the performance and feels it was a good presentation, even if it went poorly, then he/she would be engaging in unrealistic Optimism (Schneider, 2001).

The next form of realistic optimism is the "appreciate the moment principle." Appreciation is defined as the way everyday people, events, and experiences, are not taken for granted and are looked upon as giving meaning to a person's life. The use of appreciation in this type of optimism deals with the idea that if we can enjoy what we have then life will be more enjoyable. The basic notion described here is that our perception and awareness of the way we

interact in our lives is the key factor in determining if we are optimistic or pessimistic. For example, when faced with a half glass of water, a person can either say it is “half full” or “half empty.” A half full response would be appreciative of the amount of water you have not the amount you do not have. In comparison, someone who views the glass as half empty would not appreciate the amount they do have and would perceive the less than full glass in a negative light. Looking at a glass of water to determine a person's way of looking at the world is simplistic and has been used anecdotally for a long time, however, the response of half full/half empty can provide valuable information about the way a person lives their life. It is important for people to examine the reasons for a response of half empty because this belief may be relevant to other parts of their life. For example, the person who states, “half empty” may be giving half an effort in their job or education because of their lack of motivation or appreciation of the skills and/or accomplishments they deserve credit for (Schneider, 2001).

The final type of optimism is described as "optimism- unrealistic expectation or adaptive motivation." This approach attempts to compare the unrealistic biases associated with optimism with the adaptive, motivational properties it provides. If people believe nothing will happen because they are immune to diseases such as cancer, AIDS, etc., then it could be said they are unrealistic about their future. This may be unrealistic optimism as described above, but in this context it is described as unrealistic expectations. Conversely, adaptive motivation is based on the premise that people believe they can either avoid a disease or negative event because they have and are currently acting in ways to beat the odds. Also, these people have high spirits if confronted with a negative life situation. They are realistic about their condition, but are positive about their abilities to deal with what is happening (Schneider, 2001).

### *Positive Psychology*

Finally, it should be noted that a specific discipline of psychology, called positive psychology has been recently developed to study the positive attributes that people possess, compared with the negative features psychology has frequently focused on. The model of positive psychology is based on the premise that people have many positive qualities that are sometimes overshadowed by their depression, anxiety, etc. Instead of focusing on the person's pathology, positive psychology is interested in what abilities the person has to deal with their suffering. Examples of these positive qualities are optimism, coping abilities, motivation and other internal strengths. Positive psychology is based on the previous ideas of Carl Rogers and Abraham Maslow. Both believed that the focus of psychology should be on the positive qualities people have rather than the negative feelings they experience (Gillham & Seligman, 1999).

Since optimism is just one component of positive psychology, the main focus of this review will not be on positive psychology. However, as you read this review, it is important to keep in mind how influential optimism is in the development of positive psychology.

### *Etiology of Optimistic Thinking*

Seligman et al. (1984) described four major sources that influenced the development of a negative explanatory style: mother's explanatory style, adults' different feedback for performance based on factors such as gender, heredity factors; and severe sustained loss or traumatic experiences before the age of eight.

Regarding explanatory style, children with mothers who had negative attributions for life events were more likely to develop negative styles of thinking.

Gender differences have been observed in adults' evaluation of their children's intellectual performance. Girls who performed poorly in school were viewed as less intelligent,

whereas, boys who performed below average had other factors attributed to their non-success such as lack of effort (Dweck, Davidson, Nelson, & Enna, 1978).

Support for a genetic component has been supported through the use of twin studies. Identical twins (monozygotic) have been shown to be more similar on measures of optimism compared to non-identical twins (Schulman, Keith, & Seligman, 1991; Plomin, et al., 1992). Other research has focused on the predisposition for being optimistic. It appears that some individuals are born being more positive than others. Even maternal twins who appear the same in every way may end up being different in regards to optimistic thinking. One twin may tend to be more happy and content than the other. This finding has been observed as early as infancy.

Finally, the fourth influence on explanatory style deals with loss and trauma experienced by very young children. A study by Nolen-Hoeksema, Girgus, and Seligman (1986) found that children exposed to divorce were more likely to go on to develop a pessimistic attitude toward life. Other environmental influences such as poverty have been found to be related to the development of optimism. It has been found that secure attachment and development of early trust between children and their primary caregiver, result in a more positive outlook on the world (Peterson & Seligman, 1984; Snyder, McDermott, Cook, & Rapoff, 1997).

### *Measuring Optimism*

Before discussing the relationship of optimism with psychological and physical well-being, it is important to understand the various ways optimism is measured. This includes assessment tools that measure dispositional optimism, social optimism, and workplace optimism. Also, a few measures used to determine explanatory style in children and adults will be discussed. Due to limited norms and standards for some of the tests, descriptions will vary. The Life Orientation Test-Revised (LOT-R) will be included in an appendix because it is a non-

copyrighted, but well researched measure.

The most widely used measure of dispositional optimism is the Life Orientation Test-Revised, which was adapted from the original Life Orientation Test (LOT-R; Scheier et al., 1994; see Appendix A). This non-published measure of optimism has been found to accurately measure optimism/pessimism using a bipolar model. As mentioned earlier, the LOT-R is based on the direct belief model or dispositional view of optimism. It is used to measure how optimistic or pessimistic a person is and not why they are this way. This model is based on the premise that low scores define pessimism and high scores indicate optimism. The LOT-R is composed of 10 items, 3 negatively and 3 positively worded items with 4 filler items. The scores are based on responses to these items using a five-point likert scale. Total scores can range from a low of 6 to a high of 30.

Internal validity using Cronbach's alpha has been found to be  $r = .78$  and test-retest reliability after 28 months was reported to be  $r = .79$ . Convergent and discriminant validity have also been found between the LOT-R and other psychological constructs, such as depression, anxiety, and self-esteem inventories. Normative information on the test is limited. In their 1994 re-evaluation and revision of the LOT, Scheier, et al., computed means and standard deviations of 2,055 college students ( $M = 14.33$ ,  $SD = 4.28$ ) and 159 patients waiting to undergo heart surgery ( $M = 15.16$ ,  $SD = 4.05$ ). When used in research studies, optimism has been divided into three groups based on a set range of LOT-R scores. For example: low optimists range from 6 to 13, medium optimists- 14 to 21 and high optimists- 22 to 30 (Harju & Bolen, 1998). Only a few studies have made the distinction between levels of optimistic thinking (i.e., low, medium, and high). Future research should more frequently use these range of scores, and possibly normative data based on these or similar categories could be established that would further validate the use

of the LOT-R levels (i.e., low, medium, and high optimism).

The LOT-R also has been used extensively with other cultures. It is easily adapted to various languages and has been used by the following types of cultural groups: Japanese, Asian American, British, and Hong Kong college students (Dewberry & Richardson, 1990; Lai, 1994, 1995; Koisumi, 1995; Chang, 1996). Differences on the LOT-R have been observed between these groups. For example, Chang (1996) found that Asian American students were less optimistic than Caucasian students. Lai (1998) assessed 202 Hong Kong college students to determine their level of optimism using the original LOT. Results found a Cronbach alpha of  $r = .71$ , and a mean score of 9.2 ( $SD = 3.0$ ). Test-retest reliability over a three week period was  $r = .71$ .

A criticism that is brought up with using the LOT-R with other cultures is that many of the researchers do not specify if the LOT-R was translated into the language of the people it was given to. Language barriers may have a bias effect on the results of the test. One study does mention that the LOT-R was translated into a Chinese version, the Chinese Revised Life Orientation Test (C-RLOT; Lai et al., 1998). This revision included a back-translation procedure and the C-RLOT included 3 positively and 3 negatively worded items that were identical to the six scored items of the LOT-R. Results of the use of the C-RLOT have found internal validity (Cronbach's alpha) to be  $r = .65$  to  $r = .69$  (Lai et al., 1998). Test-retest reliability over a five month period was found to be  $r = .66$ .

A final note on the LOT-R is based on its use as a bi-polar method of measuring optimism (i.e., low scores equal pessimism and high scores equal optimism). Some research has suggested that the LOT-R be broken down into two separate categories or factors, whereas, optimism and pessimism would be calculated separately and not on a continuum as it is currently

done. Future research should look at developing a way to restructure the LOT-R that would separate the scoring of the two variables (Burke, Joyner, Czech, and Wilson, 2000).

Another widely used measure of optimism is the Attributional Style Questionnaire (ASQ, Peterson et al., 1982). The ASQ consists of 12 different scenarios (6 good and 6 bad) which participants rate what they believe were the causes of the scenarios. They rate the causes based on a set of criteria (internal vs. external, stable vs. unstable, and global vs. specific).

The ASQ is more specific compared to the LOT-R when determining an individual's view or their perceived control over a specific event. As previously stated, the LOT-R measures levels of optimism, whereas, the ASQ looks at the reasons why people believe certain life events are positive/negative. Optimistic thinking under this model is described as those who make external, temporary, specific attributions about negative life events (i.e., it's his fault, it will be over soon, and it's only a small piece of my entire life (Seligman, 1998).

There is also a children's version of the Attributional Style Questionnaire (CASQ). This test is for children between the ages of eight and thirteen. It is unadvised to give it to children under the age of eight due to their lack of logical understanding about life events. The CASQ is similar to the ASQ, but the items are based on situations children may face such as peers, school, etc. There are 48 items, 24 good and 24 bad situations in the CASQ and participants have a choice of either two responses to make based on reading a life scenario. Scores are totaled based on responses to the good and bad items for an overall explanatory style score (Seligman et al., 1984).

The next optimism measure that will be discussed is the Optimism/Pessimism Scale (OPS) by Dember, Martin, Hummer, Howe, and Melton (1989). The OPS consists of 56 items measuring optimism, 18 measuring pessimism, and 30 non-scoring filler items. Items are chosen

based on a four point likert scale that ranges from “strongly agree” to “strongly disagree.” Unlike the LOT-R, the OPS is based on the view that a person can be both optimistic and pessimistic, but at varying degrees. Validity and reliability for the OPS have found alpha coefficients of  $r = .94$  for the optimism scale and  $r = .86$  for the pessimism scale. Test-retest reliability after two weeks was  $r = .75$  for optimism and  $r = .84$  for pessimism (Dember & Brooks, 1989; as cited in Burke et al., 2000).

The concurrent validity between the LOT-R and the OPS was examined in a study by Burke et al.(2000). The sample for the study included 154 students, with a mean age of 29. The results of the study found that the two measures do not share concurrent validity. The researchers noted that it appeared the LOT-R measured state optimism while the OPS is a better indicator of trait optimism. This finding is consistent with the theory of dispositional optimism the LOT-R is based on. This view attempts to assess the level of optimism/pessimism a person has about the future (state optimism/pessimism), not their underlying level of optimism/pessimism.

There is also an optimism scale that measures social optimism. The Social Optimism Scale (SOS, Schweizer & Schneider, 1997) consists of 28 items in which half of the items are positively worded and the other half negatively worded. Responses are based on a four point rating scale that ranges from “completely correct” to “incorrect.”

The assessment of unrealistic optimism is done using the Unrealistic Optimism Measure (UOM, Weinstein, 1980). The UOM consists of both a regular scale and a shortened version. The regular scale has 42 items with questions that ask participants to rate the likelihood that they will experience various life events such as a heart attack or car accident. Responses are based on a likert scale that ranges from below average chances to above average chances for the various life events.

*The Relationship of Optimism and Psychological Well-Being*

Numerous aspects of psychological health have been found to be associated with having a positive outlook on life. Those that will be discussed in this review include quality of life, coping styles, depression, belief in a just world, and schizophrenia.

Previous research has found that a perceived quality of life is influenced by one's level of optimism. Other factors, such as coping styles and interpersonal relationships have been positively related with a high quality of life. Quality of life is a very subjective term and has been defined in various ways. One definition states that quality of life is based on the subjective evaluation of one's resources and happiness with these resources (Harju & Bolen, 1998).

Harju and Bolen (1998) studied the effects of optimism on quality of life of college students by studying three groups of optimists (low, moderate, and high) The participants, 204 students completed the following measures: the Life Orientation Test-Revised (LOT-R), the Brief Cope, which measures various coping styles, and a quality of life measure constructed by the researchers that was based on past research.

The results found that the high optimists rated themselves as having the highest quality of life and more effective coping skills. Gender differences were also found between optimism and quality of life. Men were found to place a high degree of importance on obtaining a high quality of life, but actually were less satisfied with their life. Women were found to be more satisfied with their lives, but didn't differ significantly in their levels of optimism with the men who were less satisfied with their lives. Women also had higher GPA's than men and academic performance tended to drop with lower levels of optimism.

More specifically, the results of this research found that the "high optimists" were significantly more satisfied with their quality of life, with the reverse being true for the "low

optimists." Although each group rated differently on the quality of life (QOL) inventory, they reported the same amount of regard for quality of life. On the coping styles rating, "high optimists" were the only group to rate high on using effective strategies for dealing with life decisions or problems. It was also found that "mid-level optimists" tended to use alcohol more often as a way of coping.

This study has important implications for understanding optimistic thinking. First, this article speaks frequently of past and current mistakes of this research topic. It also provides evidence to support their research ideas. Their critical analysis of the strengths and weaknesses of studying the effects of optimism has allowed for a better understanding of the topic. In their introduction they are very thorough and precise in detailing the history and important research that has been done on optimism. Also, other research on optimism has failed to break down the levels of optimism as this study did. The gender differences in quality of life was also interesting, and would be of great value to further study due to the variations in male and female thinking.

The research discussed in the study has many implications for enabling people to sustain happy, fulfilling lives. Due to our fast paced society, future thinking, planning and effective coping skills are crucial to our success at work, school, and in social interactions. An overall conclusion to the results according to the researchers is that, "high optimists endorsed the highest quality of life."

Other research that has focused on quality of life and optimism has been done but not in as much careful detail as the work just mentioned. Keith and Schalock (1994) found that control over intrapersonal issues, happiness with an educational situation, and positive peer relationships were important factors in having a high quality of life. Female students have listed positive peer relationships, teacher role-models, financial and personal security, and housing status as keys to

having a high quality of life (Berry, 1995).

The relationship between optimism and coping has been well documented. Optimistic people tend to display more effective behavioral and cognitive strategies for dealing with stressful situations (i.e., school and work) (Scheier et al., 2000). Optimism has been linked to positive coping styles that include active and planned, problem-focused coping (Carver, Scheier & Weintraub, 1989; Scheier & Carver, 1992). As levels of coping go up, so does enjoyment of social relationships and resistance to stressful situations (Dumont & Provost, 1999). Therefore, an individual's outlook may be developed due to life experiences and one's enjoyment of life.

Research has pointed out that there are specific domains associated with a person's overall coping style. Carver, Scheier, and Wientraub (1989) found 15 sub-categories of coping, such as: positive refraining, active coping, denial, religious coping, etc., in their development of the COPE, a 60 item coping style inventory. The use of positive reframing and active coping strategies have been shown to be highly correlated with high levels of optimism. Also, gender differences with coping have been observed. Male college students tend to use the coping styles of humor and acceptance significantly more than females. Females tend to use emotional, religious, and venting significantly more than males ((Harju & Bolen, 1998). Scheier, Weintraub, and Carver (1986) sought to determine if optimistic college students engaged in more productive coping skills than pessimistic students when confronted with stressful situations. They found a positive correlation between optimism and coping skills (i.e., social support with men) and positive reinterpretation of negative events among both men and women.

Optimists have also been found to have better coping skills when they experience more control over life events. College students reported higher expectations regarding hypothetical performance on an upcoming exam when they believed more in their efforts to do well on the

exam (Chang, 1998). This finding although important may be hard to generalize to other students because the results were based on performance in a hypothetical class. Depending on the type of class and difficulty level, expectations may change.

In the work environment, optimistic people tend to use more problem-solving techniques to deal with stressful or difficult tasks. Pessimistic people were found to use more avoidant behaviors and indulge in more negative psychological behaviors, such as overeating, sleeping, and drinking (Strutton & Lumpkin, 1992).

Coping strategies and optimism regarding health concerns have also been studied. Positive coping skills and optimism were found to be associated with less psychological distress in a non-heterosexual population at risk for getting AIDS (Taylor et al., 1992).

Optimistic thinking has been found to be clinically important in terms of the way people deal with hopelessness and depressive thinking. The idea of learned helplessness is important in understanding depression. Learned helplessness is defined as a lack of motivation or effort based on repeated negative experiences out of a person's control (Pervin & John, 1997). The notion of learned helplessness was originally defined by Seligman and his colleagues. They observed that the dogs who were continually shocked under unavoidable circumstances, failed to respond in situations when they did have control over being shocked. A sense of helplessness developed where the dogs gave up trying to avoid the shock because of the consistent pattern of unavoidable shocks. This pattern of helplessness is very common in people who suffer from depression

Seligman described three reasons for why organisms fail to respond to environmental situations. The first is based on the notion that events out of a person's control affect their motivational ability to produce responses that will place him/her in control. The second

component of helplessness is based on a learning pattern that develops through prolonged exposure to aversive events. In this context, an individual has difficulty believing that he/she has any control over negative events. Finally, the more times the individual is exposed to events believed to be out of his/her control, a sense of despair sets in. This is also known as depression (Pervin & John, 1997).

Seligman's research on learned helplessness has been a valued piece of research in studying depression. As mentioned earlier, the three components of explanatory style; internal vs. external, stable vs. unstable, and global vs. specific are responsible for measuring the way individuals interpret life events. Those who develop learned helplessness or depression seem to have an internal, unstable, and global description and prediction of life events. They believe that adverse life events are their fault (internal), they have no control over them (unstable) and they will always happen, especially in all areas of their life (global).

Additional research has looked at the influence of optimism on people who have attempted suicide. O'Connor, Connery, & Cheyne (2000) sought to show that parasuicides, people who attempted suicide but survived, are unable to develop positive thinking strategies for the future and believe they have no control over life events. They matched the parasuicides with patients being treated for physical, not emotional problems. Both the parasuicide and control group consisted of 20 participants and were matched for various demographic features (sex, age, socioeconomic status, etc.). Both groups completed various measures that included: the Hospital Anxiety and Depression Scale (HADS), the Beck Hopelessness Scale (BHS), and the Cognitive Style Questionnaire (CSQ). Results found that the parasuicides differed greatly on their level of hopelessness, depression, and anxiety compared to the control condition

The authors point out that their results have great clinical importance for the treatment of

people who attempt suicide or are hopeless about their future. They believe that interventions are needed for the cognitive distortions people have regarding the belief that they have no control over future life events. This negative thinking is what leads people to believe their future is grim and hopeless.

Another important factor that appears to influence the way people look at the world is based on beliefs about the fairness of life events. Optimistic people tend to believe the world is fair and that if they try hard enough things will go their way. On the other hand, pessimistic people tend to believe life is unfair and that things will never go their way. This theory described is in some ways similar to learned helplessness, but it is on a more global basis. It is known as the "belief in a just world." A study by Tomaka and Blascovich (1994) examined the effects of believing in a just world on the way people think of and deal with stress

The authors hypothesized that those who believe in a just world, the belief that life is challenging rather than threatening, will experience less cognitive, physiological, and behavioral responses to stress due to this positive way of viewing the world.

Belief in a just world was measured by the Belief in a Just World Scale (BJW, Rubin & Peplau, 1975). The BJW consists of 20 items that are rated on a 7-point Likert scale. An example of a question from the BJW is: "Basically, the world is a just place." Responses on the Likert scale range from "strongly agree" to "strongly disagree." Cognitive (pre-task) and stress responses (post-task) were subjectively reported by participants based on methods used in previous research. Questions were presented to participants via a computer screen and were based on a 7-point Likert scale. An example of questions measuring cognitions was: "How threatening do you expect the upcoming task to be." Subjective stress questions included: "How stressful was the task you just completed." Physiological responses (cardiac, vascular, and

electrodermal) were measured using devices known to accurately rate each physiological activity respectively. Behavioral responses were measured based on the participants' ability to perform serial subtracting tasks. Questions were also asked regarding their experience with the tasks. An example of the questions used was: "How well did you perform the task." Responses to these questions were recorded by the researchers.

Participants were first hooked up to the physiological equipment and went through a five minute rest period to determine resting physiological readings. All further instructions were done through a computer. Cognitive expectations of the task were recorded before the tasks. They then completed two serial subtraction assignments, which had them subtract from 2,549 and 2,758 by sevens as quickly as possible for four minutes. Participants completed the first task (subtracting from 2,549) aloud for 30 seconds and quietly for 30 seconds for each task minute. After the first task was completed behavioral performance of stress, perceived effort and performance were subjectively reported by the participants. Following a five minute rest period, participants completed the same task again, except this time they used 2,758 in the subtraction task.

The results of the study found that people who cognitively rated the tasks as a challenge rather than a threat also had higher ratings of a just world on the BJW scale. High ratings on the BJW also correlated negatively with subjective feelings of stress and physiological responses to stress. Finally, behavioral reactions to the tasks showed that participants high in beliefs of a just world outperformed those low in these beliefs. The results were consistent across both serial subtraction tasks

The overall design of the study was well planned and executed. Some limitations of study are based on the use of subjective measures. The researchers used subjective measures to

address perceived stress, cognitions, and performance. To gather more objective results they should have measured these variables using more empirical measures. I think they used this method because they wanted to measure state or immediate responses to the tasks. However, there are state anxiety, cognitive, and behavioral measures that could have objectively measured responses to the tasks. The use of subjective measures, such as those used in this study would need to be verified through repeated use of the measures in similar studies. The researchers do report that the measures used have been consistently used in past research, but they don't state how reliable or valid they are to measure what they were trying to accomplish in this particular study.

Another limitation to the current study is their sample size. There were only 24 participants and no demographic information about them was mentioned. It is possible that the results found were based on these participants alone and they are not able to be generalized. It would be interesting if they determined anxiety levels in the individuals using a known indicator of trait anxiety before the study was conducted. The participants may have been low in anxiety to begin with, therefore causing them to not experience excessive stress during the tasks.

As noted above, the concept of belief in a just world appears to have a relationship with optimism. The authors of this study actually mention that optimism has been found to be positively correlated with belief in a just world. This study, through its integrative introduction, gives new insight into the way people construe life events (optimistically or pessimistically) to cope with the psychological and physical stress these events cause. The authors of this current article reference studies that have studied optimism and its effects on well-being. By referencing these studies they make a connection between beliefs in a just world and optimism. They state the importance of positive beliefs in dealing with stress, but they also go a step further in their

study. They studied actual physiological and psychological responses in a stressful life event (subtracting serials). It is important for the field of psychology to understand the mechanisms responsible for why some people experience extreme anxiety in one environment and others do not.

The study of optimism and justice beliefs have not been studied extensively together, but future research may want to examine the link between these two important determinants of life functioning. To conclude this section it is important to summarize the relationship of belief in a just world and optimism. As discussed earlier, optimistic people are those who have an external, stable, and specific view of life events. Belief in a just world is based on the premise that future events will be positive based on an effort being given to these events (i.e., stable and specific reasoning). People tend to blame negative events on causes they have no control over (i.e., external causes). The importance of this link between optimism and belief in a just world is based on the similarity the two views have in determining the way people explain future events.

In terms of optimism and schizophrenia, a study conducted based on the hope that clinicians had for patients with schizophrenia will be discussed. Also, a study that looked at depression and schizophrenia will also be reviewed.

Woodside et al. (1994) focused on the faith clinicians had that their patients would improve. The study consisted of a survey being given to 205 clinical staff who worked with individuals who had a primary diagnosis of schizophrenia. The staff worked in either an inpatient unit or community mental health center. The specific research questions being looked at included: the amount of years a clinician worked with the patient, the amount of hope they had for the patient and themselves. Finally, is there a relationship between the amount of hope a

clinician had for themselves compared to the amount they had for their patients? The participants were also asked to complete the Miller Hope Scale, a measure that determines how hopeful a person is about current and future events. They were also asked to rate four hope statements that were related to the recovery of an individual with schizophrenia. An example of the statements is, "I believe that persons with schizophrenia can eventually sustain a satisfying quality of life." The four statements and the Miller Hope Scale were rated on a six-point likert scale.

The results of this study found that clinicians who were determined to have high hope by the Miller Hope Scale, were more hopeful when it came to the recovery of their patients. They also found that the amount of time spent with a person with schizophrenia determined if they remained positive. The researchers found that after five years of working with a schizophrenic patient, the clinicians' hope started to diminish. The results of this study show that being optimistic about a patients' future may be based on personal beliefs of positive future experiences. On a general level, this study provides validity for the use of optimistic thinking when working with people who have a chronic mental illness. However, future additional research would be helpful in order to measure the exact benefits of having a hopeful, optimistic therapist.

Another study looked at the causes of depression in a group of patients with schizophrenia. The researchers hypothesized that a negative explanatory style led to the patients feeling depressed. The participants included 113 patients (68 male, 45 female) with a DSM-III-R diagnosis of schizophrenia at two Canadian hospitals. Only 111 participants were included in the final results because two did not finish the required tests. The participants completed the Positive and Negative Syndrome Scale (PANSS) which addressed the positive and negative symptoms of

schizophrenia, the Calgary Depression Scale for Depression (CDSS) which is a 9-item scale that specifically measures depression in schizophrenia, and the Attributional Style Questionnaire (ASQ). The participants were assessed 3 to 10 days after admission.

The results of the study showed that the patients who had more negative symptoms of schizophrenia also tended to be more depressed and have a negative explanatory style. Specifically, negative perceptions of themselves and the world by the participants, led to the results found in this study.

The results of this study are important for a number of reasons. First, as the researchers point out a negative explanatory style may be the cause of the depression, not the psychopathology associated with schizophrenia. This finding may be important in understanding the dynamics associated with treating depression in schizophrenia. In a sense the researchers are saying the different aspects of the persons' pathology needs to be addressed more specifically and not on the global levels of just one disorder (i.e., schizophrenia). Too many times this happens and the specific causes of depression may be overlooked because of the overwhelming disease of schizophrenia. Future research that further breaks down the causes of pathology in schizophrenia may shed light onto new treatments and diagnostic procedures for other psychological issues, not associated with schizophrenia (i.e., negative explanatory style) (Addington, Addington, & Robinson, 1999).

### *The Relationship of Optimism and Physical Well-Being*

The beneficial effects of optimism on health have been verified in various studies. Higher immune system functioning, more productive coping before and after surgery and better coping with chronic illness are some of the effects optimism has on an individuals' physical well-being (Scheier et al., 2000). The study of optimism and its relationship with health dates back to the

mid-1980's. Chris Peterson, a psychology professor at Virginia Tech, had his students complete the Attributional Style Questionnaire (ASQ) and self-report their current health and number of doctor visits they had recently. The professor then followed the students for a year, measuring their physical well-being. The results of his year long study found that pessimists had double the amount of infections and doctor visits than the optimists (Peterson, 1988). Seligman (1998) points out that the way we think (optimistically or pessimistically) about our health may actually impact how healthy we are. For example, research has shown that optimists are healthier, make better life choices, and live longer than pessimists.

The study of optimism and its relationship with immune system functioning was looked at by Brennan and Charnetski (2000). The researchers wanted to determine if optimistic thinking had an effect on the way the antibody Immunoglobulin A (IgA) functioned. Immunoglobulin A is one of the strongest antibodies and has been found to have a negative relationship with the amount of colds people have. Previous research by Kamen-Siegel et al. (1991) found cellular immunity is negatively affected in pessimists. In the Brennan and Charnetski study, 112 undergraduates volunteered from a Northeastern Pennsylvania University. Saliva samples to measure IgA were collected from each student and the participants also completed the Attributional Style Questionnaire (ASQ). The results of the study found that pessimism and hopelessness are negatively related to immune system functioning. This finding provides validation that optimism has a direct affect for enhancing resistance to illness. Additional research that looks directly at the physiological processes and their relationship to optimism would be of great benefit to the field of psychology.

Optimism has also been shown to reduce a number of physical ailments (e.g., headaches, upset stomachs, and sleep problems (Robbins, Spence, & Clark, 1991). Research has found that

college students who experienced high stress and scored low in optimism had more somatic complaints than those who were stressed but were high in optimism (Lai, 1995).

Additionally, optimistic people have also been found to participate in more proactive attempts at healthy behavior. Scheier and Carver (1992) found that optimism was a key component for healthy behavior in people who underwent open heart surgery. The healthy lifestyle included eating a low-fat diet, vitamin consumption, and participation in a cardiac rehabilitation program.

Research has looked at the effects optimistic thinking has on people either recovering from or about to have an operation. Scheier et al., (1989) looked to determine if optimism affected the reactions of men who already underwent or were about to have coronary artery bypass surgery. The participants completed various questionnaires the day before surgery, six to eight days after surgery and six months post-surgery. The questionnaires measured various attitudes about their surgery and their levels of optimism. Results found that optimists tended to be less depressed and had lower levels of aggression before surgery. Optimists also reported more happiness, a high degree of satisfaction with their medical care and positive emotional responses to family and friends. Finally, at six months post operation, optimists reported a higher quality of life than pessimists.

Other research by Fitzgerald, Tennen, Affleck, and Pransky (1993) found similar results in men who underwent heart bypass surgery. They evaluated participants one month before surgery and eight months post surgery. They found that men who were optimistic dealt with pre-surgery stress better and had a greater life satisfaction post surgery. Similar effects for women who have undergone coronary bypass surgery have also been found (King, Rowe, Kimble & Zerwic, 1998).

Research on optimism has also focused on the relationship between positive thinking and

dealing with cancer. Carver et al. (1993) looked at the way people dealt with treatment for early stage breast cancer. Participants were rated on their level of optimism using the Life Orientation Test (LOT) at various times (before surgery, 7 to 10 days after, and 3,6, and 12 months post-surgery). They found that the women who were more optimistic before surgery tended to have a better response to life during the various assessments post-surgery. Research on cancer patients has also been conducted with men. Johnson (1996) studied the effects optimism had on men who underwent radiation treatment for prostate cancer. As in the above study with women cancer patients, the LOT was also used to rate optimism. Optimism was assessed pre-treatment, during the treatment, at 2 weeks and 1 and 3 months. Results found that those high in optimism maintained a more positive attitude about their illness throughout the entire assessment period

The research that describes the effects of optimism on physical well-being encompasses more than just recovery from injury and illness. It has also discovered the beneficial effects of optimism on women who are pregnant. The specific research that will be discussed deals with how women deal with prenatal stress, a factor that can lead to problems at birth.

Researchers were interested in determining if optimistic thinking was a key factor in helping women deal with the stress of being pregnant who were at a high risk for complications. The participants included 129 women with a mean age of 31 who were between 10 to 20 weeks of gestation. Prenatal stress was measured using various stress and anxiety scales. Optimism was measured by the Life Orientation Test (LOT). Health was assessed by adapting questions from medical doctors on relevant health factors women would face during pregnancy. The results found that women who were more optimistic had healthier babies. Lower optimistic women tended to have premature babies who had lower birth weights. The researchers also found that the higher optimistic women also exercised much more than the women with a negative outlook.

(Devincent, Lobel, Meyer, & Kaminer, 2000).

This finding may be important in understanding why people who exercise report being able to think more clearly, feel less stressed, have more energy, and have a more positive outlook on life. A study conducted at Duke University (Babyak et al., 2000) provides validation that exercise can reduce depressive symptoms in a clinically depressed population. The sample for the study included 156 non-active people between the ages of 50 to 70 who had a diagnosis of clinical depression. The participants were divided into one of three groups: moderate exercise three times /week for 30 minutes per day; medication only; and moderate exercise plus medication. The study lasted for 16 weeks and the results showed that all groups had significantly less depressive thinking.

The researchers point out that the change in mood was just as effective in the medication group as it was for the exercise groups. They feel this gives validity to the use of exercise in treating depression. They also report other significant findings that were related to cognitive functioning. Those in the two exercise groups were found to have more improvement in their concentration, planning, and organizational abilities as compared to the medication only group. Finally, the researchers hypothesize that the greater blood flow to the brain caused by exercise may be the reason the exercise group had less depressive symptoms and showed higher cognitive improvement (Babyak et al., 2000).

The findings of this study are important because of the fact that the participants who were not on medication improved as much as the medication group in terms of clinical depression and higher cognitive functioning. Using exercise to alleviate depression is something researchers need to further address so it can be more frequently used for people who suffer from depression. It can be an alternative for people who are either against medication or for those that may not

benefit from medication.

To summarize the above research on optimism and physical health or healthy behaviors, it is important to emphasize the impact that optimistic thinking has on coping with a physical illness or attempting to prevent illness. The research shows that immune system functioning is higher in those who are optimistic. Higher immune system functioning is directly related to fewer colds and other immune system diseases. Also, it has been shown that optimism is very influential in helping people deal with the psychological strain of having a devastating condition such as cancer. However, research on optimism has also looked at how caregivers cope with the stress of taking care of another person. Less depressive symptoms, better physical health, and constructive time management skills were variables found by optimistic people who were taking care of someone who had cancer (Christman, 1990).

Longitudinal research has been done with medical patients to determine if an optimistic outlook influenced their rate of survival and/or quality of life (Maruta, Colligan, Malinchoc, & Offord, 2000). The study was conducted over a thirty-year period and consisted of 839 patients. The patients were selected for the study between 1962 and 1965 while they were patients for various medical reasons at the Mayo Clinic in Minnesota. Optimism scores were obtained using the optimism-pessimism scale (PSM) of the Minnesota Multiphasic Personality Inventory-I (MMPI-I) at the beginning and again thirty years later. High scores are indicative of a pessimistic explanatory style and low scores indicate a positive explanatory style.

At follow-up, only 523 participants (86%) were able to be contacted. The other 14% of the original sample had either died or were unable to be found. The results showed that those who had higher scores on the optimism-pessimism Scale (PSM), which indicates pessimism had a higher rate of health problems. This trend was found to be higher as the amount of pessimism

increased. The researchers point out that many factors may have influenced why optimists were healthier. They hypothesized that optimists may take a more proactive approach toward receiving the medical care they need. One potential confound to this study is that it is possible the pessimistic people may have had worse medical problems than the optimistic group. Therefore, if they knew their condition was severe they may have just accepted their negative health.

To conclude the section on optimism and physical health, a theory of why optimism is effective in maintaining good health will be described.

Seligman (1998) lists four ways that optimism can benefit health. These characteristics, summarized by Seligman are based on research that has been conducted on learned helplessness.

The first way optimism enhances physical health is in terms of immune system functioning. Research on immune system functioning was described above and is described in similar detail by Seligman.

The second factor that influences health is that optimists tend to be more dedicated to healthy behaviors and will seek medical advice as needed to prevent or treat any health problems.

The third way in which health is bolstered is that optimists tend to experience fewer negative events than pessimists. Research has shown that people who experience more negative events (i.e., being fired, divorce, etc.) are prone to more health problems.

The fourth reason that optimists have better health is that they are more likely to have healthier social supports. Optimists are able to maintain friendships longer and talk with friends about problems they are having.

This list of ways to enhance or maintain physical health is not exhaustive, but it does

summarize the research that has been described above about the various ways optimism impacts physical health. Understanding, preventing, and maintaining good physical health has been shown by the literature described above to be positively influenced by having a positive outlook on life. It is important for clinicians to be aware of this research so they can be better equipped to treat pessimistic thinking, especially if it is impacting a persons' physical health.

### *Optimism In Children and Adolescents*

The importance of optimistic thinking in children and adolescents has not been looked at as extensively compared to the research with optimism and adults. This section will look at some of the research that has focused on these two populations with regards to optimistic and pessimistic thinking.

The first study that will be described is known as the Penn Prevention Program. The program was started by Gillham, Reivich, Jaycox, & Seligman (1995). The purpose of the prevention was to focus on children between the ages of 10 to 13 years old who were at risk for depression due to a negative explanatory style, hostility, poor social skills or family conflict. The participants were fifth and sixth graders who were chosen from a school district of over 900 students outside of Philadelphia, PA. Children were screened using the Child Depression Inventory (CDI), and the Child Perception Questionnaire (CPQ). The researchers tabulated the results and came up with a cut-off score to be used to determine those who were at risk. The sample of at risk children as indicated by the two assessment tools, included 34 girls and 35 boys (n= 69). A no treatment, but at risk control group was also added that included 32 girls and 42 boys (n= 74).

The prevention part of the program was based on cognitive-behavioral techniques. The intervention lasted for 12 weeks and the participants met once per week for 1.5 hours after

school. Groups had 10 to 12 students and were led by doctoral students. Specific techniques used in the group were in-group teaching of cognitive reframing skills and homework assignments.

The results of the study found no pre-treatment differences between treatment and control groups except that the control group tended to come from wealthier families who were more educated compared to the treatment group. After the 12-week intervention program, the treatment group participants showed significantly less depressive feelings, and better classroom behavior compared to the control group. There was no change in explanatory style as measured by the CASQ. At the six month follow-up, lower depressive thinking and parental reports of less externalization of negative thinking were found for the treatment group. Follow-ups were also conducted at 12, 18, and 24 months. Results showed that the treatment group continued to show improvement with depressive symptoms, and pessimistic children developed a more positive explanatory style as the intervention continued. The researchers point out that explanatory style has a mediating effect on depression. Therefore, as their views of the world became brighter, their levels of depression declined (Jaycox, Reivich, Gillham, & Seligman, 1994).

The findings of this intervention program are important for clinicians to understand. With the growing amount of depression and aggression among children, interventions that reduce depression and change negative explanatory styles are needed in schools throughout the country. The use of programs like this with young children can prevent more severe psychopathology from developing.

The positive benefits of optimism have not been studied as extensively in adolescents. The limited amount of research conducted has found that adolescents who are more optimistic tend to do better in school, display less risk taking behavior, and experience less depression

(Puskar, Sereika, Tusaie-Lamb, Mumford, & McGuiness, 1999). Due to the excessive amount of violence adolescents are exposed to in our society, teaching kids about having a positive outlook is important.

One of the few studies that has looked at the effects optimism has on coping and quality of life in an adolescent population was done by Puskar et al. (1999). They wanted to determine if optimism affected levels of depression and reactions to life events in a rural adolescent population. They found that the adolescents who were high in optimism experienced lower levels of depression, less anger, and more positive reactions to stress.

The effects of optimistic thinking has also been studied in relation to practicing safe sex in a group of minority inner-city adolescents (Carvajal, Garner, & Evans, 1998). They found that those who were high in optimism had more intentions to not engage in unsafe sex. The results also showed that those who were more optimistic believed that the use of condoms would be more beneficial in reducing the chances of obtaining a sexually transmitted disease. However, to date, no studies have exclusively looked at the effects of optimism on physical health, academic performance, and coping ability in an adolescent population.

### *Optimism and the Workplace*

The influence of optimism on job performance is a very hot topic in today's business world. The field of Industrial/Organizational Psychology is constantly attempting to find new ways to make employees and employers work better together. Finding ways to enhance production and satisfaction among employees is also among the concerns of industrial psychologists. The study of optimism as a factor for increasing production and performance has been conducted.

Among women between the ages of 40 and 75 years old, those who had a more positive

explanatory style were more productive at work, enjoyed being at their job, and were more creative with their skills (Phelps & Waskel, 1994).

Other research on optimism in the workplace has examined the physical and psychological health of women. A study by Fry (1995) looked to determine if optimism played a role in the physical and psychological health of women executives in Canada. The participants were 104 women with 79% between the ages of 36 and 52. Various assessment tools were used to determine levels of optimism, self-esteem, and physical complaints. The authors measured optimism using the Life Orientation Test (LOT). Self-esteem was measured by the Rosenberg Self-Esteem Inventory (RSEI) and health was assessed by the Health Opinion Survey (HOS). Results of the study found that optimism was associated with higher self-esteem, less physical complaints, and lower burnout rates among the women executives. The researchers point out that these findings have important implications for helping women acclimate to both the psychological and physical stressors in high stress jobs. Developing interventions and prevention programs to enhance the physical/psychological well-being of employees may lead to increased production and satisfaction in the workplace.

Recently, researchers have developed an optimism scale specifically for the business community. The QO2, a behavioral assessment tool used in the workplace, has a sub-scale to measure optimism. The purpose of the QO2 is to measure the expectations an employee has about success for himself and the company (McCann, n d.).

### *Optimism and Friendships*

The relationship of optimistic thinking and friendships has also been studied. It has been hypothesized that pessimistic people tend to have friends that are pessimistic (Peterson & Bossio, 1991). This notion is described in the context that pessimistic people seek out other negative

thinkers. Current research has failed to prove that this relationship exists. The only relationship found between optimistic/pessimistic people was that optimistic thinking tended to be highly correlated with maintaining friendships, but this finding was only significant for male/male friendships. The researchers suggest that males are less nurturing and accepting than females, therefore, females may accept friends that have differing viewpoints than their own (Reilley & Dember, 1998). The context in which people socialize or make friends may be heavily influenced depending on a person's outlook. It is very difficult to be around a person who maintains a negative outlook on life. Therefore, further research on the social interactions and issues regarding optimistic/pessimistic thinking would be of great value.

### *Optimism and Sports*

Optimism and sports is a topic that would be of great interest to a sports psychologist. Positive thinking about ability, motivation, and succeeding in athletics is the focus of the research described in this section

Seligman (1998) describes three ways in which a positive explanatory style will affect the way people play and achieve success in sports. The first explains that an optimistic person will try harder and go on to win, especially after losing or facing a tough competitor. The second style of people who will succeed based on having a positive view, is based on the concept of a team approach. If the entire team holds a positive attitude under the circumstances described in the first example, then they are more likely to win or overcome adversity when faced with disappointment such as losing. The final predictor of sport success is when a person changes from a pessimistic style of thinking to a more positive one. Seligman believes that this transformation of seeing the world will be sufficient to produce success.

Seligman has conducted research on athletes to assess their beliefs about what is

necessary for success. He conducted an intervention with a swimmer from the University of Berkeley four months before the 1988 Olympics in Seoul, South Korea. He gave the swimmer, Matt Biondi, the Attributional Style Questionnaire (ASQ). He scored in the high range of optimism. Next, Seligman and Biondi's coach had Biondi practice the races he would be competing in at the Olympics. The coach on a number of occasions had him believe he swam slower than he actually did. Instead of being frustrated and giving up, Biondi went onto to swim the next practice races faster than what his actual time was the first time. He also went onto win 5 gold medals in Seoul.

Seligman points out that he swam faster the second time due to his high explanatory style. He refused to give up after receiving the slow time. Instead, he persevered and was much faster the second time. An extension of this research into other athletic teams at various amateur and professional levels would be interesting to determine if this finding is consistent across all levels of competition and individuals.

### *Changing Negative Thinking*

Just because a person may have a negative disposition or explanatory style does not mean they have to stay this way. There are various individual or group therapy interventions available that can help a person develop a more optimistic outlook on life. As mentioned earlier, positive psychology attempts to look at a person's strengths rather than their weaknesses to help them overcome difficulties in their life. Seligman (1998) has adapted Albert Ellis' ABC model for dealing with pessimism. The A stands for adversity, the B for belief, and the C for consequences. The ABC model deals with the way a person approaches and makes sense of an event. People with negative explanatory styles will tend to look at adverse situations as being their fault and will in turn believe things will not work out for them, which is the consequence of their negative

feelings about the situation. People with positive explanatory styles will tend to deal with adverse situations with the belief that they were not at fault and had no control over the outcome. Therefore, the consequence for their feelings is positive because they do not internalize fault for the adverse circumstances. The ABC method is a way of logging beliefs about events.

The next step in changing negative thinking is through the use of the techniques “disputation” and “distraction.” Disputation deals with arguing with yourself about the reality of your beliefs. Instead of merely feeling dejected about a failure or poor outcome, you need to give reasons for why the event occurred and maintain a positive outlook about how to change the outcome in the future. The next technique is distraction. Distraction deals with using various cognitive-behavioral techniques such as thought stopping to deal effectively with adverse situations. For example, people who continually think negatively of themselves or life can tell themselves to stop and immediately think of a pleasant thought or positive feeling they have about themselves. Once this is reinforced long enough, their negative thinking may begin to become more positive.

These are just some example of ways to change negative thinking. As Seligman notes, changing from a pessimistic viewpoint to a positive one is not easy. He believes this is due to the fact that pessimistic people believe they have a realistic outlook on life so changing to optimistic thinking is difficult. However, with proper reinforcement and realistic optimism, people can learn to have a more positive outlook on life and their future.

### *Conclusion*

The purpose of this literature review was to describe the various ways optimism influences both psychological and physical well-being. The two main views of optimism, the dispositional view and explanatory style, were used as the foundation for the research discussed.

Some of the studies specified which theory they used as the foundation for their work. Others failed to do this, however, the methods they used (i.e., assessment tools) gave some idea to the model they were following. It is important to note that the focus of this review was to be based primarily on the dispositional view, but as the search of the literature progressed, it was clear the two models overlap and are not distinguished at times in the literature.

The literature on the etiology of optimism is not that expansive. There is a notion of both genetic and environmental components, but the research described above does not focus on the causes of optimism in great detail. However, the research does provide evidence that some people are born with a predisposition or temperament to be more positive. On the other hand, the way a person is raised, their culture, and personal attributes also influence the way they see the world. Further research is needed to better understand and discriminate optimistic thinking that is biologically based compared to that which is learned behavior.

Also discussed was the various assessment tools used to measure Optimism. The two most widely used are the Life Orientation Test-Revised (LOT-R), which measures dispositional optimism, and the Attributional Style Questionnaire (ASQ), which measures explanatory style. Other optimism measures look at social optimism, workplace optimism, etc.

In terms of psychological well-being, optimism has been shown to be instrumental in reducing and/or preventing depression. In terms of explanatory style, much of the research focuses on learned helplessness as the basis for developing a pessimistic outlook. Optimism thinking has also been found to be helpful in developing productive coping skills. The relationship between coping and optimism needs to be examined further. These two variables are hard to separate to determine which causes the other. In terms of more severe psychological problems such as schizophrenia, optimistic thinking has been important in determining staff

perceptions of their patients. As discussed, staff members who had a positive outlook for themselves and their patients believed they had a better chance of improving.

Physical well-being is influenced by optimistic thinking in many ways. From recovery of heart surgery to coping with cancer, research has shown that optimistic people deal with these life stresses better than pessimists. Also, optimistic people tend to be more motivated and consistent with healthy behaviors which allow them to remain more healthy.

Other variables thought to be influenced by optimism that were discussed included friendship, safe sex, and sports. These issues have been found to be positively correlated with being optimistic. As shown, optimistic thinking is a very powerful tool for dealing with many of the situations and difficulties people face in their day to day lives. However, those who are pessimistic can learn to become more optimistic through the various techniques described above in the section on changing negative thinking.

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## Appendix A

Life Orientation Test-Revised (LOT-R, Scheier, Carver and Bridges,1994). Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are “no correct” or “incorrect” answers. Answer according to your own feelings, rather than how you think “most people” would answer. Record your response to each item based on the 5 choices below. Indicate response to the right of each item

- 1= I agree a lot
- 2= I agree a little
- 3= I neither agree or disagree
- 4= I disagree a little
- 5= I disagree a lot

1. In uncertain times, I usually expect the best. \_\_\_\_\_
2. It's easy for me to relax. \_\_\_\_\_
3. If something can go wrong for me it will. \_\_\_\_\_
4. I'm always optimistic about my future. \_\_\_\_\_
5. I enjoy my friends alot. \_\_\_\_\_
6. It's important for me to keep busy. \_\_\_\_\_
7. I hardly ever expect things to go my way. \_\_\_\_\_
8. I don't get upset too easily. \_\_\_\_\_
9. I rarely count on good things happening to me. \_\_\_\_\_
10. Overall, I expect more good things to happen to me than bad. \_\_\_\_\_