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The appraisal of positive life changes following cancer diagnosis: An interview study

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ABSTRACT

Objective: This research examines positive life changes that cancer patients may experience following their diagnosis. Although cancer is often believed to have negative impacts on the life of patients, positive impacts have been also discussed empirically. This study focuses on cancer patients' appraisal of positive life changes following their diagnosis and examines how and in which fields they recognize their lives as positively changed based on the study of Petrie et al. (1999).

Methods: A total of eight cancer patients in a cancer support group participated in this research. A group discussion and semistructured interviews were conducted. Content analysis was applied.

Results: The content analysis produced insights into the seven types of cancer-related life changes: *improved empathy, greater knowledge about health, renewed recognition of life, change in personal life priorities, greater appreciation of health and life, improved close relationships, and healthy lifestyle change.* Negative life changes were also reported.

Significance of the research: This research showed that cancer patients tended to find and appraise their own positive life changes following cancer. The categorization of positive life changes basically supported that of Petrie et al. (1999), but produced an original category: *renewed recognition of life.* Positive life changes might be seen as a natural process that encourages patients' adjustment to cancer. Understanding positive impacts of cancer could be important in capturing the life-sized features of cancer patients. Future research could expand the view of the impacts of cancer and demonstrate how people recognize them as benefits.

KEYWORDS: Cancer, Cancer patients, Positive life changes, Growth, Sense of control

INTRODUCTION

Life-threatening diseases, such as cancer or HIV, can have an extraordinary influence on an individual's life. The diseases are often believed to cause psychological problems, such as depression, grief, anger, or anxiety (Ogden, 2000; Taylor, 2000). Shontz (1975), on the other hand, suggests that people with life-threatening diseases tend to seek out more positive appraisals of their lives and show personal

growth. Such positive appraisals may involve "increased appreciation of personal worth," "greater willingness of helping sick people," "renewed recognition of life as a second chance," or "acceptance of old and renewed personality." In particular, the positive appraisals of cancer (Taylor, 1983; Collins et al., 1990) and its impacts on mental health (Taylor et al., 1984; Taylor & Brown, 1988; Andrykowski et al., 1996; Mast, 1998) or physical health (Taylor, 2000; Taylor et al., 2003) have been academically acknowledged. The positive appraisals of cancer have been named differently based on the variant perspectives of cancer patients, such as *benefit finding* (Antoni et al., 2001; Sears et al., 2003), *fighting spirits* (Cotton et al.,

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1999; Schou et al., 2005), *optimism* (Scheier & Carver, 1985, 1992; Peterson, 2000), *positive illusions* (Taylor & Brown, 1994; Taylor, 2000), *positive life changes* (Petrie et al., 1999), or *post-traumatic growth* (Schaefer & Moos, 1992; Cordova et al., 2001). Such appraisals have been energetically researched and portrayed in the academic sphere for the past two decades.

An early investigation of positive appraisals of cancer (Taylor, 1983) found that 53% of breast cancer patients reported positive life changes, and only 17% reported negative life changes following cancer. The study of early-stage breast cancer patients (Sears et al., 2003) also revealed that 83% of the participants reported at least one positive benefit of the cancer-related experience. Thus, the occurrence of positive appraisals of cancer seems to be quite frequent, and may even be higher than that of negative ones. However, the study of Petrie et al. (1999) reported that there were 8 out of 30 breast cancer patients who answered “nothing positive” in the questionnaire that asked about the experience of positive life changes following cancer, so that such positive life changes cannot be considered as inevitable. Therefore, an idea could exist that many patients tend to recognize both positive and negative life changes following their diseases (Zemore et al., 1989).

The above studies showed that cancer patients tend to have positive appraisals of cancer. Now, it seems important to focus on the contents or types of positive appraisals of cancer and get deeper insights. For instance, the open-ended questionnaire-based study of 30 breast cancer patients (Petrie et al., 1999) categorized the types of positive life changes following the diagnosis. It was found that “improved close relationships” (33%) was found to be the most common type of positive appraisal, and “greater appreciation of life” (27%) and “change in personal priorities” (20%) were the next. Overall, this study found positive life changes in social, psychological, and physiological domains. This study suggests that cancer patients were able to recog-

nize their own positive life changes in many cancer-related domains. However, the study of Petrie et al. was based on cancer patients’ written responses to an open-ended question. We conducted an interview-based study, which enabled us to obtain larger amount of information to examine the categorization of Petrie et al. The current study focuses on the recognition of cancer patients believing “something has changed after cancer” (in other words, “positive life changes following cancer”), and tries to examine the types of positive life changes to discuss how cancer patients positively appraise their disease, life, and self.

METHODS

The study consists of a group discussion and one-to-one semistructured interviews. All the participants were the regular attendees of a cancer support group in an infirmary in Staffordshire, UK. This support group was voluntarily organized once a week by a cancer treatment professional. The average age was 59, ranging from 50 to 67 years old. The details of the participants in the interview are listed in Table 1.

The theme of the group discussion was “the things that you think changed positively after you experienced cancer.” The discussion involved six cancer patients (three men, three women). The discussion was not announced to the participants in advance (because we did not want the participants to prepare advance notions of the theme), so the participants were the patients who happened to attend the support group on the day of the discussion. The discussion was organized in the hour of the cancer support group, so that they could discuss the theme in a relaxed manner as they usually do in the group. The group discussion was tape-recorded and transcribed with the participants’ permission. The discussion continued approximately 1.5 h. Then, three of the participants of the group discussion agreed to participate in the interview and two others were newly recruited, so that five patients were

Table 1. Characteristics of the participants in interviews about life changes following cancer

Patient no.	1	2	3	4	5
Age	67	58	64	50	56
Sex	M	W	M	W	W
Cancer type	Kidney	Breast	Prostate	Colon	Breast
Time of diagnosis	2.5 years	Unknown	4 years	2 years	6 years
Cancer state	Incurable	Cured	Under treatment	Cured	Cured

finally interviewed (two men, three women). The interviews lasted for approximately 35 min. The interviews were also tape-recorded and transcribed with the participants' permission. All the participants were aware that they could refuse to answer the questions if they wanted. All the data were collected by the first author.

Content analysis was conducted by two independent researchers (the first author and a psychology student). The transcription produced 770 statements. The statements were examined based on the seven types of positive life changes illustrated in Petrie et al. (1999): *improved empathy, greater knowledge about health, a second chance, change in personal life priorities, greater appreciation of health and life, improved close relationships, and healthy lifestyle change*. The researchers discussed until they were in agreement whether each life change fit into the category.

RESULTS

The content analysis of the group discussion and interviews produced seven categories of positive life changes following cancer: *improved empathy, greater knowledge about health, renewed recognition of life, change in personal life priorities, greater appreciation of health and life, improved close relationships, and healthy lifestyle change*, which basically supported the categorization of Petrie et al. (1999). A *second chance*, however, was renamed as *renewed recognition of life*, because the participants showed a variety of changed recognition of life (e.g., life as a second chance, life as finite), so that the category of second chance could expand and include

the wider range of recognition changes to explain the positive life changes of cancer patients more comprehensively.

The content analysis produced more specific insights into positive life changes following cancer. The first finding was that the participants tended to feel more empathy toward people who are diagnosed with cancer or other serious illnesses (Table 2). Many of the participants emphasized that they were more encouraged to understand the problems of other people because they once suffered from their own problems. Their improved empathy seemed not restricted to only cancer patients but people with all sorts of serious illnesses. This indicates that cancer could improve the empathy of patients and expand their views toward illness in general.

Second, all the participants showed greater knowledge about their own cancer (Table 3). They had precise information about their own cancer and treatment. Moreover, the majority of the participants reported that they learned more about cancer in general, and showed different levels of interest in cancer-related information. For example, some patients were actively searching for information by themselves (e.g., reading books) whereas others tended to be dependent on more passive methods (e.g., watching occasional TV programs, listening to the talk of other support group members). Some participants showed confidence in dealing with cancer through knowing about the disease.

Third, the interview questions asked whether the participants recognized their lives as a second chance, which produced both agreement and disagreement (Table 4). They showed not only the change of life recognition as a second chance but

Table 2. *The contents of improved empathy based on the content analysis*

Content	Example
I feel more empathy toward other cancer patients and their families.	"You now feel more empathy toward the families of your friends?" "Yes, that have cancer and have died of cancer."
I feel more empathy toward people with any sorts of serious illnesses.	"Who do you think your empathy improved the most toward?" "All the people with . . . not just with cancer but serious illnesses."
I try to help ill people by making good use of my experience.	"I try to get them my experience and help them."
I think I can understand what kinds of problems other cancer patients have because I know how it affects a life seriously.	"I was so ill, I came to realize what a serious illness was . . . and of course makes you think more about other people's problems."
I tend to be worried about other patients in worse situations than me.	"You see a lot of people that are far worse off than you are, and I start to think how they cope and how do they feel."

Table 3. *The contents of greater knowledge about health based on the content analysis*

Content	Example
I know a lot more about my cancer.	"I've read about prostate cancer and the immune system, and I know a lot more."
I know a lot more about cancer in general.	"So, your knowledge about illness is not only about yourself but other people?" "Yes, that's right."
I am always searching and trying to get information about cancer as much as possible.	"If you reading across a newspaper and see the word cancer draw your attention or hear cancer crop up on the radio I tape anything."
I gained knowledge about health from doctors and nurses.	"The doctors and the nurses on the ward. . . . That was where I gained the information."
I gained knowledge about cancer in the support group.	"I just picked up off other people from the group, and I got books and references to learn more about it."
I do not try to find information by myself, but I watch TV programs about cancer.	"I don't go and find the information. If it is television program, I watch it if it's not too depressing."
I feel I can fight against cancer by having greater knowledge.	"I want to know everything you possibly can about him (cancer) . . . because that's the enemy . . . to understand and be glad."

also a variety of changes in life recognition, so that this category was renamed *renewed recognition of life*. In particular, the renewed recognition of death and mortality was often reported. Such

recognition of death could encourage them to find the different value of life. For instance, some participants reported that they felt freer from any problems because they had experienced the hard-

Table 4. *The contents of renewed recognition of life based on the content analysis*

Content	Category
I feel I am given a second chance to live because I once believed I was going to die of cancer.	"I know that it was so serious and I could have died and the fact I didn't. . . . It's like giving me a second chance in life."
Cancer does not defeat me but gives me a second chance to live.	"It hasn't taken my life, it's given me a second chance."
Cancer makes me realize that my life has an end.	"After I got the cancer, I realized life is finite."
I feel I have already gone through the most difficult time of my life because of coping with cancer-related problems.	"I'm better now than I ever was, because I thought gone through with mourning as I've already died."
I realize I have to find positive aspects of my life by myself.	"You gotta help yourself."
I feel my spirituality has increased.	"When I lie in bed, if the moon's out . . . now I see differently—perhaps I say little . . . a little prayer or something."
I feel I am more moral.	". . . lady gave my change and she gave me 20p too much. That's a moral position, but now I felt for her that I want to give her her 20p back"
Although I read a lot about cancer patients who recognize their lives as a second chance, I personally do not agree.	"I've read about this second chance a lot of time but I never thought of it in that light. It's just the same all life."
I do not think that cancer caused any changes in the philosophy of my life.	"I don't feel it has made any difference."

Table 5. *The contents of change in personal life priorities based on the content analysis*

Content	Category
I do not want to waste time because each day becomes more precious and important for me now.	"I'm more determined to make every day count rather than just drifting along."
I am no more interested in the distant future.	"I live for today, for this week, for the next week."
People surrounding me are more valuable.	"People were just stepping stones. Now, they are very precious."
I become more patient with people.	"The new me doesn't go around bullying people."
I realize I may have neglected my family for a long time before I had cancer.	"I realized I probably neglected her over the years because . . . you go to work, it's like one big hustle and bustle."
Work is less important for me.	"Now, I'd like to stay part time . . . I feel happier now. I'd like to stay with this time."
I do not recognize particular change in my life priorities.	"What's your change in priority after you got the diagnosis?" "The same really."

est time in their lives because of the battle with cancer. Increased spirituality and morality were also reported.

Fourth, there was a considerable degree of agreement that personal priorities were changed following cancer (Table 5). Their priorities seemed especially changed in the domain of life and people. All of the participants emphasized the importance of time left to live and taking life one day at a time. Also, they reported that they became more people oriented and realized the renewed value of their families and friends. Work, on the other hand, tended to be regarded as less meaningful, particularly for the participants who used to work full time. However, some participants reported that cancer had no impact on their life priorities.

Fifth, the majority of the participants showed greater appreciation of health and life following cancer (Table 6). The participants especially emphasized that they realized how they took everything for granted before having cancer, especially their health condition. They tend to rethink about health and lives and appreciate them more, and such appreciation tended to involve a variety of aspects in life from general (e.g., appreciation of nature) to specific (e.g., time with grandchildren).

Sixth, the majority of the participants emphasized that their families and friends became closer and supportive after they got cancer (Table 7). Instrumental, physical, and psychological support was reported. The most common type of support seemed to be frequent visits by family members. However,

Table 6. *The contents of greater appreciation of health and life based on the content analysis*

Content	Example
I appreciate my life more in general than I used to.	"I find when the sunshine is brighter and the bird sings brighter, everything looks better today than it used to do before I got the cancer."
I appreciate the time spent with my family, especially with my grandchildren.	"Now, I'll have the children anytime, all the time. It's that sort of thing. I appreciate them now more."
I do appreciate my life although I have a lot of difficulties to cope with.	". . . I have a lot of problems to cope with but yes I do appreciate the fact now at least I can lead some sort of life."
I realize how I took everything for granted before having cancer.	"It just makes you stop and think about life in general, and how much you took granted before which now you don't take things for granted so much."
I feel no rush of time.	"Every day now is precious in itself, even if I do nothing in that day."

Table 7. *The contents of improved close relationships based on the content analysis*

Content	Example
I feel closer to my family and friends after I got cancer.	“When I had the cancer first, I think it did bring us closer.”
My family are more supportive both instrumentally and mentally.	“How did he support you?” “Just by being with me. Taking me anywhere I needed to go . . . trying to keep me.”
My family are more supportive although they do not discuss my cancer.	“I get a lot of support from my daughter. She does give me a lot of support although she won’t discuss the cancer itself.”
My family and friends visit and phone me more often.	“People would visit, phoning me up all the time, asking and talking about it.”
Cancer makes me feel closer to my family although it doesn’t make them feel closer to me.	“I think more about my relationship with me wife than I used to do although she doesn’t reciprocate.”
I feel closer to my friends after I had cancer.	“Now, they knock on the door and talk and sit and go to museums . . . that’s never happened before.”
My family cannot discuss and accept my death.	“. . . they had difficulty in discussing your death.”
My family did not give me support because they could not accept that I got cancer.	“I got no support from me family. My wife didn’t want to know. I think she couldn’t cope with it because people can’t.”
My daughter does not want to discuss cancer because she is afraid of having the same cancer owing to heredity.	“I think she’s frightened because my mum had breast cancer and my grandma had breast cancer, so it sort of come down the family . . . so, she won’t discuss it at all.”
My family left me because she could not accept that I had cancer.	“she stormed out and never came back, . . . she couldn’t cope with her father having cancer.”
My friends left me because they could not accept that I had cancer.	“They couldn’t face you, couldn’t face somebody who’s got cancer because people think that anybody who’s got cancer, they’re going to die.”

although the participants feel closer to their families and friends, some of them tended to avoid discussing cancer and death. Some participants said that their family members were afraid of talking about cancer because they had a chance to inherit the same cancer in the future. Cancer could destroy a patient’s relationships and make him/her isolated or stigmatized.

Seventh, healthy lifestyle change was particularly notable. The majority of the participants reported that they were more interested in health and changed to a healthier lifestyle (Table 8). Diet was often improved with the ingestion of more vegetables and fruits or medical pills. The frequency of medical checkups was another important factor of a healthy lifestyle. Some participants started to take regular checkups after they had cancer although they rarely saw the doctor before. Also, some participants pointed out that they had lower levels of stress owing to the absence of work or worry. Another notable finding may be that some participants tried to not only regain a healthy lifestyle but also become healthier than ever before. However,

there was no participant who stopped smoking after the diagnosis. This could be because this study had a very limited number of participants and many of them had no experience of smoking.

Eighth, although negative life changes were not asked about in the interviews, all the participants reported them, so they were also categorized independently (Table 9). Negative life changes mainly involved a preoccupation with thinking about cancer, the fear of death, the stress of treatment, a decreased social life, and depression. Many such negative changes seemed to include aspects that are difficult to remove from a participant’s mind and body. All the participants reported that they were in real shock when they were diagnosed with cancer, and some of them experienced serious depression, especially people with a high level of illness-related symptoms or physical disabilities.

DISCUSSION

The aim of this study was to examine different types of positive life changes that cancer patients

Table 8. *The contents of healthy lifestyle change based on the content analysis*

Content	Example
I eat more fruits and vegetables for my health.	"I have a lot of vegetables and fruits in a continental Mediterranean type diet."
I take vegetable tablets and vitamin pills for my health.	"I also have a tomato tablet called 'Licopede' . . . and I also take vitamin pills."
My partner also eats healthier like me.	"She's on the same one, so she is benefiting from my diet as well."
My partner suddenly became keen on my health after I got cancer.	"She is very conscious about this healthy lifestyle. . . . It didn't happen in the last 30 years."
I see my doctors more often and take regular checkups.	"I see about half dozen every week at McMillan . . . and that's never happened"
I am more aware of my health condition.	"You try to read your body more . . . be aware of things more now than I use to."
I am more interested in my health.	"Health has suddenly focused you."
I feel less anxious because I quit working now.	"I took life too serious, whereas now I don't. I don't go work, I don't have that worry."
Cancer did not change my lifestyle a lot because I had always kept my health regardless of having cancer. But, it encourages me to be healthier than before I had cancer.	"Is cancer a kind of turning point for you to think about health?" "Not really, because I was that way before. . . . Now, I want to get back and be more healthy."
I do not stop smoking although I know it is bad for my health.	"I know smoking is not good for your health . . . but it was one of those things which is the lesser of two evils."

Table 9. *The contents of negative life changes following cancer based on the content analysis*

Content	Example
I cannot stop thinking about my cancer.	"I still can't remove from my mind that this thing had its course to run."
I once experienced a really bad time when I got the diagnosis.	"It was a very bad time. It was a big shock."
I am sometimes deeply depressed when I am alone. Cancer decreased my social life.	"When I'm on me own, it's different. I feel completely different because then sometimes it does upset me a bit."
Cancer decreased my social life.	"I don't get out and I don't see anybody."
Cancer deteriorates my symptoms of another disease.	"My main concern was they told me I couldn't have HRT any longer."
I tend to feel stressed when I see my doctors.	"When I go to see my doctor . . . I'm a bit uptight and wound up because I don't know what he is going to tell me."
I feel like I am a victim of cancer.	"It's the cancer that's done this to me. It's the cancer that's made me this."
I am scared of death even though my cancer is cured.	"I thought I was just going to die. I thought that's what I was scared of, that's what I'm scared of now really."
I have a bad sleeping pattern.	"I've got an awkward sleeping pattern . . . partly because I live on me own and I find the slightest noise and I jump and I'm awake."

may experience following their diagnosis. A variety of positive life changes were found and the participants reported their own “benefits” of cancer. This finding seems to be consistent with that of Petrie et al. (1999), as they found a high frequency of positive changes in several life domains in the sample of breast cancer patients. Also, the categorization of positive life changes was largely consistent with that of Petrie et al. (1999), but the category of *second chance* was renamed *renewed recognition of life* to obtain a more comprehensive explanation of the cancer patients’ appraisal of positive life changes. At the same time, negative life changes were also frequently reported. This point also supports previous studies, suggesting that cancer patients tend to experience both positive and negative disease consequences (Zemore et al., 1989).

The findings of this study would suggest some interesting features of positive life changes following cancer. First, all the participants reported some kinds of positive life changes, which could indicate that the recognition of positive life changes could be a natural experience for cancer patients. The ideas of *positive illusions* could pose another insight in this argument (e.g., Taylor & Brown, 1988; Taylor & Armor, 1996). The authors insisted that unrealistically positive views of the self (e.g., optimistic future perspectives, exaggerated illusion of controlling difficulties) could be found in people facing life-threatening events. Hamera and Shontz (1978) also suggested that such positive illusions were more likely to be perceived by patients themselves rather than their families or hospital staff. These studies indicate that positive life changes could also be subjective ideas of “something has positively changed,” so that the patients may not necessarily realize the true extent of their life changes. To that extent, positive life changes could be the skewed recognition of personal life, which is highly likely to occur in the face of life-threatening events. Positive life changes following cancer could be a “natural” experience for cancer patients, so researchers could not recognize it as a special or unusual feature of cancer patients to understand the psychological states of cancer patients accurately.

Second, many of the reported positive life changes could be correlated with a sense of controlling self, disease, and life. For instance, the ideas of *greater knowledge about health* (e.g., “I feel I can fight against cancer by having greater knowledge.”) or *renewed recognition of life* (e.g., “I realize I have to find positive aspects of my life by myself.”) seem to indicate that knowledge gain or new life recognition are not only positive life changes but also effective ways of controlling self, disease, and life. The study of Thompson et al. (1993) showed that

cancer patients with a high sense of controlling daily emotion and physical symptoms had better adjusted to cancer. In other words, cancer patients who possess a sense of controlling self may be more likely to experience positive life changes. In this sense, the feeling of control would be considered as an important keyword to capture the recognition of positive life changes. Heijmans (1999) also found that Addison’s disease patients who believed their disease to be uncontrollable showed a high level of physical, social, and mental disability. A good sense of controlling the disease could be one of the essential factors in establishing positive life consequences. This point, however, is not strongly argued by the results of this study, so further research will be continued.

Third, the findings of *improved close relationships* indicate that cancer could be equally likely to increase or decrease a patient’s relationships. Some people would be encouraged to have a closer relationship with the patient by knowing that he/she has cancer, but other people would be discouraged and leave him/her. Such results could indicate how difficult it was for people to accept the fact that their family member or friend had cancer. However, the relationships between patients and their families or friends could be one of the most important features of life that encourage patients to see their worlds more positively. The study of social support in ovarian cancer patients (Houck et al., 1999) also showed that “concern for family and friends” could decrease the patients’ quality of life. Thus, the presence or absence of close relationships could be an important indicator of the experience of positive life changes.

Fourth, some participants suggested that the life of cancer patients who experience positive life changes could be considered as a better life than before having cancer. For example, some patients reported that they were in a more moral or healthier lifestyle than before cancer. This idea indicates that cancer could be a factor that encourages them to develop stronger morality or a healthier lifestyle than they ever had. In one sense, life following cancer would be recognized as not an extended life but a perfectly renewed life by some patients. Although it is difficult to produce empirical backups for that idea, cancer could be a strong watershed that could change the recognition of patients in many ways.

Fifth, the recognition of positive life changes seemed less related to the seriousness of disease because those with both curable and incurable cancer were equally likely to agree with such changes. Kreitler and his colleagues (1993) indicated that the life satisfaction of patients with a serious dis-

ease was not related to the domain of health. In other words, although patients were not satisfied with their health conditions, they could find other domains (e.g., economic state, social life) to maintain their life satisfaction at the same level as that of healthy individuals. Although the direct impact of cancer involves damages to health (e.g., physical disabilities), the patients could find their own advantages, which could explain the irrelevance between positive life changes and the seriousness of cancer.

This study has several limitations. First, the current study involved only a small number of participants. This number is insufficient to conduct any statistical tests. Additionally, the time spent on each interview was relatively short. This was because most interviews took place before the time of the support group meeting, so the researcher had to stop the interview when the group meeting was started. The researcher sometimes asked only quick questions or stopped the interview although she had more issues to discuss.

Second, a sampling bias exists. All the participants were the attendees of the same support group, which could greatly influence the ideas or attitude that patients had toward cancer. In particular, the support group aimed to change the negative outlook of the patients, so they might have more positive attitude toward cancer than those outside the group. In this sense, the findings of this study might not be generalized easily.

Future research may involve cancer patients from several conditions (e.g., hospital patients, patients in/outside the support group) to improve the generalizability of the findings. Although it is believed that interviewing is the best method to gain deeper understanding of the participants, quantitative studies would be a key to understanding the frequency of positive life changes.

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