

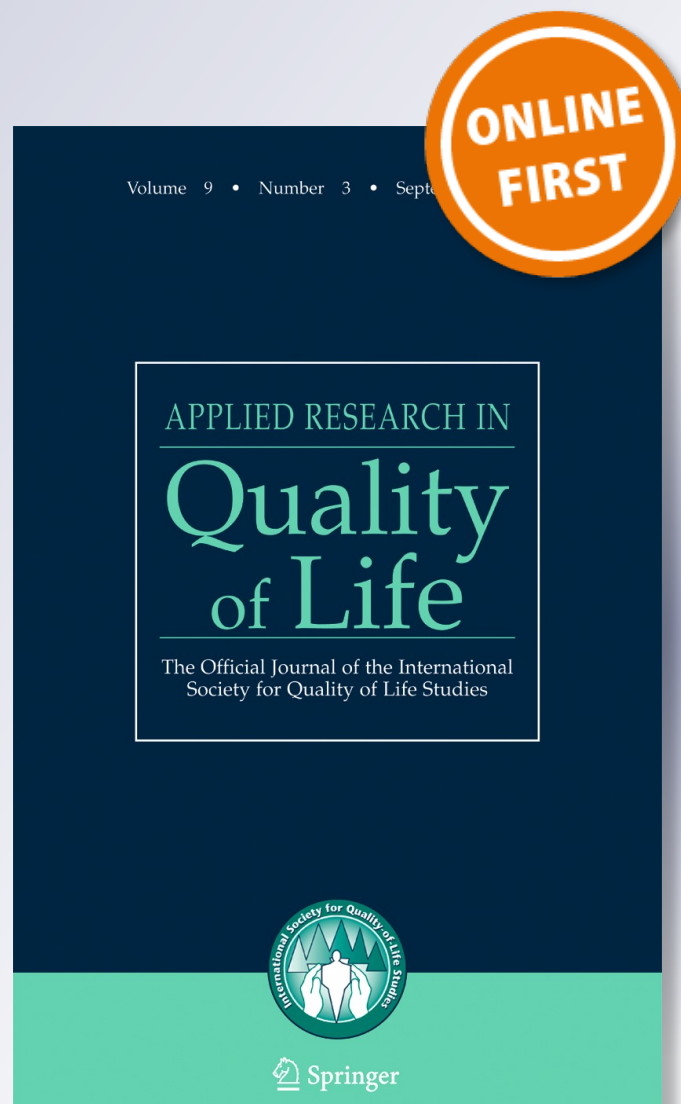
Strong Attachment to Heroes: How Does It Occur and Affect People's Self-Efficacy and Ultimately Quality of Life?

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Strong Attachment to Heroes: How Does It Occur and Affect People's Self-Efficacy and Ultimately Quality of Life?

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Abstract In spite of increasing evidence on the influence of heroes on the lives of ordinary people, there has been no formal study on the subject in relation to people's attachment to a hero (or hero attachment). The current study proposed a consumer model to examine how a hero makes a positive impact on people's lives in terms of their hero attachment, self-efficacy, and life satisfaction. Using observations from a survey, we examined both the direct and indirect effects that the contribution of a hero in people's fundamental A-R-C (autonomy, relatedness, and competence) need fulfillment has on self-efficacy and ultimately on life satisfaction. We found that the impact of a hero in fulfilling the A-R-C needs has a direct, differential effect on self-efficacy and life satisfaction. More importantly, we found that the fulfillment of A-R-C needs by a hero significantly influences hero attachment, which in turn positively affects life satisfaction through self-efficacy. As the first empirical study on hero attachment in

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relation to people's self-efficacy and life satisfaction, the study yields significant theoretical contributions and practical implications for practitioners and policy makers in the areas of public health, education, and quality of life.

Keywords Quality of life · Hero attachment · A-R-C needs · Self-efficacy · Life satisfaction

“We should remember who we are. The best way we remember who we are is to remember who our heroes are.”—Steve Jobs.

Introduction

If you are asked to pick a hero who influenced your life the most, who would come to mind? According to a survey, Martin Luther King, Jr., Michael Jordan, and Princess Diana were found to be the three most popular heroes when people were asked the question above (Sullivan and Venter 2010). Several existing studies suggested that heroes significantly influence people's self-concept and quality of life. For example, when Michael Jordan made incredible plays in critical moments during his prime time, many people were so fascinated by his plays that they viewed him as a hero. When people are exposed to Jordan's memorable experiences, such as flying to the hoop against all defenses played by two or three opponents and scoring a dunk shot, they relate his experiences with their own challenges and goals to overcome.

People who witness great achievements made by a hero can become strongly attached to the hero. The experience leads them to feel the sense of “I can do too,” or self-efficacy, which in turn generates more positive views about their lives, i.e., increased happiness or more satisfaction in life. In short, a personal hero to whom an individual establishes strong attachment yields a significant positive effect on the individual's psychological capital such as self-efficacy (or the feeling of “I can do it too”), and as a result, on life satisfaction or happiness of the individual.

As the sheer volume of research on the topic indicates, curiosity and attention devoted to people's quality of life, more specifically, life satisfaction or happiness, have been on the rise. Several important studies have shown significant findings and implications on how attachment to other people influences one's quality of life or well-being (Lee and Sirgy 2004; Oishi and Diener 2001; Neff et al. 2007; Chaplin et al. 2010). These studies suggested that people seek to increase their quality of life not only by spending quality time with family and friends but also by building attachment to actors, singers, business leaders, and sports stars, as their heroes. However, to our knowledge, no study has been performed on how a person's quality of life, more specifically, life satisfaction, is related to a hero to whom an individual has strong attachment.

The central purpose of this article is to address how attachment to a hero (or hero attachment) develops and affects one's quality of life. According to previous studies, there are two ways of defining a hero based on some outstanding act the hero performs for society and his or her relevance to individuals. The first way defines a hero as a

person who is perceived to have considerable and lasting importance to society (North et al. 2005). This view looks at a hero's level of achievement made for the society in general. A hero is an individual placed in a public role due to some feat or quality that he or she possesses. The second way defines a hero as a person who serves as a role model of personal conduct, aspirations, and actions. According to this view, fathers, mothers, or teachers can be heroes to some people because of their personal values as role models, although they may not have made a clear and considerable contribution to society. This view looks at a hero only based on the personal relevance of a hero to individuals.

Recently, however, a new "combined" view is suggested, which considers both societal contribution and personal relevance. Based on their deductive and inductive investigations, Sullivan and Venter (2010) suggested that the concept of the hero can be defined by both the specific features of the heroic figure and the subjective views of the person identifying the hero. In their study, the researchers defined a hero in a more elaborated way as (1) having noteworthy accomplishments in the eyes of individual or agreed upon in the wider society, (2) serving as role model for individuals' own action, and (3) serving as idealized self-image on character.

For the current study, we adopt the combined view that considers both personal relevance and significant contribution to society. In our study, as in Sullivan and Venter (2010), a hero is defined as an individual who not only has considerable and lasting importance to society but also serves as an individual role model of personal conduct, aspirations, and actions. This view emphasizes that without personal relevance, heroic performance for society is not sufficient for one to accept another as a hero. Many previous studies emphasized the positive role of a hero in people's lives. For example, Kelly (1997) indicated that a hero has value to the people in moral terms, fostering active citizenship. Campbell (1988) claimed that a hero has constellating power to pull people together. Sullivan and Venter (2010) suggested that a hero has strong influence in shaping their self-concepts, especially selves. More recently, Jun et al. (2014) empirically showed that a hero inspires people, which results in increased belief in their capabilities. As these studies showed, a hero has strong influences on people's quality of life.

The main focus of this study is to examine how one's hero attachment affects his or her life satisfaction in general through increased self-efficacy. Both self-efficacy and life satisfaction have recently been gaining importance especially in the domains of both positive psychology (Seligman and Csikszentmihalyi 2000; Snyder et al. 2011) and consumer psychology (Sirgy and Lee 2006; Burroughs and Rindfleisch 2002).

We also examine how a person develops hero attachment, focusing on how the antecedent variables—the fulfillment of three fundamental human needs, specifically, autonomy, relatedness, and competence needs (or A-R-C needs)—affect his or her hero attachment. It is noted that the antecedent variables in the current study do not need satisfaction per se, but the impact of a hero on need satisfaction, i.e., reflecting how much a hero contributes to people's need fulfillment. Therefore, we focus on looking at differential effects by a hero's contribution on need fulfillment, not direct effects by a person's overall level of need fulfillment. Our study, therefore, does not examine how overall level of need satisfaction is related to hero attachment, but how the impact of a hero on need satisfaction is related to hero attachment.

A significant contribution of our study is that it is, to our knowledge, the first study to examine the role of a hero in affecting the lives of people by formally addressing the dynamic relationship among the contribution of a hero on need satisfaction, hero attachment, and the two important subjective well-being variables (self-efficacy and life satisfaction). Given that there is no formal study on the positive influences of hero attachment on self-efficacy and life satisfaction in spite of the significant influence of heroes on the lives of ordinary people, our study attempts to make a significant contribution by focusing on how hero attachment is formed and how it influences self-efficacy and life satisfaction. Although we focus on the effect of hero attachment on life satisfaction through self-efficacy, our empirical study will also include the direct effect of need fulfillment by a hero on self-efficacy and life satisfaction.

In the literature review that follows, a brief overview will be given on attachment studies and the role of a hero in people's life. Next, major hypotheses on the relationships among the fulfillment of A-R-C needs by a hero, hero attachment, self-efficacy, and life satisfaction will be provided. Then, an empirical study and its results will be discussed, followed by summary and conclusion. Finally, practical implications, academic contributions, and future research directions will be presented.

Literature Review and Hypothesis

Hero Attachment

A body of attachment research has produced several interesting findings about how an individual's attachment to another important person influences his or her own life. One of the findings that has been consistently documented is that attachment makes a positive impact on the lives of the individuals, in terms of their social skills, exploration in adulthood, performance, self-efficacy, well-being, etc. (Allen et al. 2002; Elliot and Reis 2003; Davidovitz et al. 2007; La Guardia et al. 2000; Wei et al. 2005). Attached figures examined in the attachment studies include parents, romantic partners, leaders, and teachers, with whom the individuals have frequent or regular contact. These findings suggest that attachment figures such as heroes, although they do not have frequent or regular contact with people, can still positively influence people's lives. As Sullivan and Venter (2010) documented, heroes such as Martin Luther King, Jr., Michael Jordan, and Princess Diana influence people's lives significantly, without physical or regular contact with people. Therefore, it would be interesting to formally examine how people's hero attachment influences the lives of people, particularly in terms of self-efficacy and life satisfaction.

The current study defines a hero as an individual who not only has considerable and lasting importance to society but also serves as an individual role model of personal conduct, aspirations, and actions, according to the combined view we adopted, as mentioned above. This definition considers both societal contribution and personal relevance (Sullivan and Venter 2010). Accordingly, one's hero attachment is defined as the degree to which an individual is attached to a hero.

Although the need for a formal study on hero attachment increases, there has been no empirical study on how hero attachment affects people's lives. The current study will formally examine how hero attachment affects people's lives, particularly in terms

of self-efficacy and ultimately life satisfaction. Our study also examines how attachment is formed by the fulfillment of A-R-C needs by a hero.

In the following section, we developed hypotheses focusing on how A-R-C need fulfillment affects self-efficacy and life satisfaction not only directly but also indirectly through influencing hero attachment. In order to address these issues, hypotheses will be derived from the A-R-C need theory and other psychological theories such as the broaden-and-build theory, as detailed below.

The Direct Effect of the Fulfillment of A-R-C Needs by a Hero on One's Self-Efficacy and Life Satisfaction

The needs for autonomy, relatedness, and competence (or A-R-C needs) are fundamental human needs which were identified in self-determination theory (Ryan and Deci 2000). The need for autonomy refers to a person's need to feel that his or her activities are self-chosen, self-governed, and self-endorsed while the need for relatedness refers to a person's need to feel connected to others. Finally, the need for competence refers to a person's need to seek the sense of achievement and challenge (Ryan and Deci 2000; Thomson 2006).

It is expected that the fulfillment of A-R-C needs by a hero influences self-efficacy and life satisfaction in two ways: directly or more indirectly through hero attachment. As for the direct effect, the body of literature on need satisfaction and life satisfaction (or subjective well-being) clearly established the link between the two (Ryan and Deci 2000; Wehmeyer et al. 2009). For example, self-determination theory has provided a strong conceptual argument that fulfillment of fundamental human needs—autonomy, relatedness, and competence—yields enhanced self-motivation, social development, and well-being (Ryan and Deci 2000). Based on self-determination theory, several researchers empirically documented that need fulfillment is strongly related to life satisfaction or subjective well-being (La Guardia et al. 2000; Deci and Ryan 2000; Sheldon et al. 2004; Wehmeyer et al. 2009).

As an extension of the relationship between need satisfaction and life satisfaction, we can imagine that if a hero's influence can increase the level of need fulfillment, the level of life satisfaction is positively influenced. Recently, there have been several studies which addressed the differential effects of need fulfillment on attachment, and eventually, life satisfaction (Thomson 2006; Kim et al. 2013; Sullivan and Venter 2010). For example, Thomson provided a reasoned argument that the fulfillment of A-R-C needs by human brands including heroes can make a positive impact on the lives of people. Kim et al. (2013) specifically showed that need satisfaction by a hero made a significant differential impact on life satisfaction. It is concluded that if an individual feels that his or her level of need satisfaction increases, particularly in terms of A-R-C needs (autonomy, relatedness, and competence), his or her level of life satisfaction or subjective well-being will increase. Thus, it is expected that need fulfillment by a hero has a direct effect on life satisfaction, in addition to the indirect effect through hero attachment.

Therefore, it is hypothesized.

H1: The fulfillment of A-R-C needs by a hero has a direct, differential effect on (a) self-efficacy and (b) life satisfaction.

The Effect of Fulfilling A-R-C Needs on Hero Attachment

It is expected that hero attachment is strengthened as individuals perceive their hero fulfills their fundamental A-R-C needs. Ryan and Deci (2000) suggested that the fundamental A-R-C needs are essential for psychological growth and constructive social development. In order to grow and socially develop, people tend to build attachment toward individuals who are perceived to fulfill their fundamental needs, i.e., A-R-C needs. Self-determination theorists claim that the fulfillment of A-R-C needs qualifies as responsiveness, suggesting that fulfillment of A-R-C needs can be strong predictors for strengthening attachment (Ryan and Deci 2000). This means that the more a person perceives a hero to fulfill his or her basic needs, i.e., autonomy, relatedness, and competence, the stronger that individual's attachment will be toward the hero.

The effect of the need fulfillment by a hero on attachment to that hero is also supported by the theory of relevance by Houston and Walker (1996). The theory posits that when people feel their needs are fulfilled by a certain hero, the hero's values and images become personally relevant to them. The values and images of the hero become important because they play a significant role in achieving their own important goals and values (Houston and Walker 1996; Lockwood and Kunda 1997). As people consider the values and images of the hero to be self-relevant, or self-congruent, they tend to feel emotionally attached to the hero (Johnson et al. 2011).

Based on above discussions, it is expected that fulfillment of A-R-C needs by a hero can lead to hero attachment. Therefore, we propose

H2: Fulfillment of A-R-C needs (autonomy, relatedness, and competence needs) by a hero has a positive effect on hero attachment.

The Effect of Hero Attachment on Self-Efficacy

It is expected that the hero attachment affects self-efficacy positively. The concept of self-efficacy, a sense of "I can," has recently been gaining importance especially in the domain of positive psychology (Seligman and Csikszentmihalyi 2000; Snyder et al. 2011). According to Bandura (1997, p.7), self-efficacy is defined as "people's belief in their capabilities to produce desired effects by their own actions." Previous studies suggested that self-efficacy or a sense of "I can" comes from sources such as previous mastery experience, vicarious experience, verbal persuasion, emotional arousal, and imagining oneself behaving effectively (Bandura 1989a, b, 1997).

In line with the ideas of these studies, hero attachment could increase self-efficacy mainly through two sources: vicarious experience and emotional arousal. Each source may increase self-efficacy as follows in detail.

First, people reinforce or undermine self-efficacy through vicarious experience. One way people have vicarious experience is by learning from their personal heroes. As people watch their hero make considerable achievements or overcome hardships, they tend to imagine themselves doing similarly challenging tasks and identify themselves with the hero. This enables them to believe in their own capabilities, or self-efficacy. Hence, it is expected that the stronger a person is attached toward a hero, the stronger he or she feels the sense of "I can," or self-efficacy.

Second, people can feel or reinforce self-efficacy through positive emotional arousal. People feel more confident or the sense of “I can” when they feel positive emotions such as love or attachment. Maddux (2009) claimed that emotional states influence self-efficacy. While unpleasant emotional arousal undermines self-efficacy, pleasant emotional arousal reinforces self-efficacy because comfortable psychological and emotional states are likely to lead people to feel confident in their abilities. Attachment enables people to have positive emotions through positive arousal (Sternberg 1986), which in turn leads to higher levels of self-efficacy. The process by which positive emotion leads to self-efficacy can be explained by applying Fredrickson’s broaden-and-build theory (2001). The theory states that positive emotion not only broadens cognition and thought-action repertoires in the short term but also builds individuals’ enduring personal resources in the long term. According to Fredrickson (2001), personal resources include psychological resources such as self-efficacy.

The positive impact of hero attachment on self-efficacy is also supported by the attachment theory of social support. The theory posits that attachment figures to which people feel attached can play social support roles (Bowlby 1988; Waters and Cummings 2000). According to the theory, strong attachment or emotional bond provides three kinds of social support to attached people: feelings of availability, noninterference, and encouragement. As an attachment figure, a hero provides these supports by creating the conditions that enable people to explore the world with confidence (Bowlby 1988; Feeney and Thrush 2010). When people feel that somebody, especially their hero, is available or encouraging, they tend to engage in behaviors such as trying new things, challenging the limit, and setting higher level of goals. This is because they believe that someone is available to assist them when they want or even when they fail. Based on the above arguments, we propose

H3: Hero attachment has a positive effect on self-efficacy.

The Effect of Self-Efficacy on Life Satisfaction

It is expected that people’s confidence, self-efficacy, is closely related to satisfaction with their lives. Since self-efficacy helps one come up with better solutions (Maddux 2009), a high level of self-efficacy is positively linked to efficiency and effectiveness in problem solving and goal achievement. This is evidenced in previous studies. For example, Maddux (2009, p.339) stated that “When faced with a difficult decision, people who have confidence in their ability to solve problems use their cognitive resources more effectively than those who doubt their cognitive skills.” Therefore, a person with a high level of self-efficacy is more likely to accomplish a goal by trying new things and challenging limits with confidence, which result in enhanced satisfaction with his or her life.

Self-efficacy is also closely linked to mental health. Previous studies showed that depressed people have a low level of self-efficacy (Maddux and Meier 1995; Bandura 1997). They usually believe that they are less capable of doing things efficiently regardless of their actual capabilities. The lack of self-efficacy undermines one’s ability, which is likely to make one feel powerless in many important domains of life. Conversely, a high level of self-efficacy increases mental health and thereby makes individuals feel generally more satisfied in life.

In addition to the above studies, the positive effect of self-efficacy on life satisfaction can also be explained with Fredrickson's (2001) broaden-and-build theory. The theory states that positive emotion broadens people's thought-action repertoires and builds enduring personal psychological resources (e.g., self-efficacy), which in turn leads to life fulfillment and well-being (e.g., life satisfaction in general). According to the theory, positive emotion associated with self-efficacy, or feeling of "I can," leads to increased happiness or greater life satisfaction. For example, an empirical study of the theory on meditation effect supports that increased psychological resources such as self-efficacy through meditation led those in the meditation group to judge their lives as more satisfying and fulfilling (Fredrickson et al. 2008). Therefore, we propose

H4: Self-efficacy has a positive effect on life satisfaction in general.

Methods

To empirically test the major hypotheses, we conducted a survey study and analyzed the data using the structural equation modeling analysis. Although this study focuses on the outcome effect of hero attachment, it employs the comprehensive model which includes both antecedent and outcome variables. One of the advantages of this model is that we can not only test the outcome effect of hero attachment but also confirm if fulfillment of A-R-C needs has a significant effect on hero attachment. The major concepts such as hero attachment, A-R-C need fulfillment, self-efficacy, and life satisfaction were measured based on well-established studies, as discussed below.

Survey Observations and Measurement

A survey was conducted on both undergraduate and MBA students at a major university in Seoul, Korea. Participants were given extra credit for their respective class as an incentive. A total of 295 usable observations were compiled. The data were analyzed using basic statistics and linear structural equation model run by an AMOS program.

The demographics of the participants of our survey are as follows: 52.9 % were male and 47.1 % were female. Participants ranged in age from 19 to 56 years; 74.2 % were in their twenties, 14.8 % in their thirties, 7.7 % in their forties, and 3.3 % in their fifties. Further analysis showed that the demographic variables did not make any significant difference in terms of our main results.

In the first part of the survey, we provided the definitions of a hero and asked them to name a favorite hero of their choice. A hero was defined as an individual who not only has considerable and lasting importance to society but also serves as an individual role model of personal conduct, aspirations, and actions. Based on the definition, subjects were asked to name an individual to whom they feel most strongly attached.

The ten most popular heroes to whom participants felt strong attachment are listed in Table 1 in descending order with their name, occupation, frequency of being chosen, and category. As shown, Ahn Cheolsoo, Kim Yuna, Steve Jobs, Ban Ki-moon, Ji-sung

Table 1 The top 10 list of the most strongly attached heroes

Order	Name	Occupation	% (Frequency)	Category
1	Ahn, Cheolsoo	Entrepreneur and politician	15.6 (46)	Entrepreneur and politician
2	Kim, Yeona	Figure skaters	8.5 (25)	Sports star
3	Steve Jobs	CEO of Apple	7.3 (22)	Business entrepreneur
3	Yoo, Jae seok	Entertainment MC	7.3 (22)	Entertainer
5	Park, Ji-sung	Soccer player	6.1 (18)	Sports star
6	Ban, Ki-moon	President of UN	3.4 (10)	Politician
7	Roh, Moo-hyun	Former president of Korea	2.7 (8)	Politician
7	Yi, Sun-sin	Korean naval commander (1545–1598s)	2.7 (8)	Historical figure
9	Bill Gates	CEO of MS	1.7 (5)	Business entrepreneur
10	Park, Jeong Hee	Former president of Korea	1.4 (4)	Politician

Park were named as their favorite heroes in the top 10 list. Although not included in the top 10 list, Chan-ho Park, Oprah Winfrey, Kun-hee Lee, and even Batman were also chosen as heroes by the Korean participants. The list also shows that Korean participants chose successful business entrepreneurs, politicians, sports stars, and TV entertainers as heroes. The list also includes historical figures such as the past presidents of Korea, Roh Moo-hyun and Park Jeong Hee, and the legendary naval commander, Yi Sun-sin.

To check if the participants properly understood the concept of a hero, the participants were asked two questions on a seven-point scale about the hero they chose later in the questionnaire. The two questions were “The hero I chose had confronted serious problems, difficulties, or conflicts which challenges people’s idea and goals” and “The hero has considerable and lasting influence on my values, and I admire him or her.” We found that the average score for a hero was 6.00 on the seven-point scale, indicating that participants understood the concept of a hero well. The correlation of the two item measures was not highly correlated ($r=0.315^{**}$), showing that the two questions measure two complimentary dimensions, not similar ones.

Given the choice of their favorite hero, the respondents were then asked to answer the next list of questions on attachment, A-R-C need fulfillment, self-efficacy, and life satisfaction as shown in Table 2. The fulfillment of A-R-C needs was measured using Thomson (2006) and Sheldon et al.’s (2001) scale. Although the A-R-C needs are separately measured, they were combined as the one A-R-C need measure, as done in La Guardia et al. (2000). Hero attachment was measured using Batra et al.’s emotional attachment scale (2012). Self-efficacy was measured using Schwarzer and Jerusalem’s scale (1995). Items for measuring self-efficacy included “If someone opposes me, I can find the means and ways to get what I want,” “It is easy for me to stick to my aims and accomplish my goals,” and “I am confident that I can deal efficiently with unexpected events.” Life satisfaction was measured using Diener et al. scale (1985). Items for life satisfaction included “In most ways, my life is close to my ideal,” “The conditions of my life are excellent,” and “I am satisfied with my life.” Both self-efficacy and life satisfaction were measured using a seven-point scale.

Reliability and Validity

To test the reliability of the variables, Cronbach's alpha values were calculated as shown in Table 3. Generally, we assumed high reliability if the Cronbach's alpha values were above 0.6. The results showed that all Cronbach's alpha values are above 0.7, and thus they have strong confidence and internal consistency.

To test the validity of the major constructs, we ran an exploratory factor analysis (EFA). A principal component analysis and Varimax rotation were carried out to extract primary features. According to factor loadings, in Table 3, all measures have high scores of factor loadings, indicating that each construct has validity. To more formally test validity, especially in terms of convergent and discriminant validity, we conducted a confirmatory factor analysis (CFA) by using AMOS as shown in Table 3. The model fits (CMIN/DF=1.911, CFI=0.964, NFI=0.929, IFI=0.965, TLI=0.941, and RMSEA=0.056) generally satisfy the required level. As to convergent validity, all the factor loadings of CFA turned out to be significant ($t \geq 1.96$), which Bagozzi et al. (1991) suggest as a criterion of convergent validity. As shown in Table 2, the major constructs turned out to have validity and reliability.

Table 2 Major items and measures for analysis

Items	Measures	References
Attachment	I feel emotionally connected to XYZ. I feel a bond with XYZ. XYZ feels like an old friend.	Batra et al. (2012)
Fulfillment of autonomy needs	XYZ makes me feel controlled and pressures me to be in certain ways. XYZ makes me feel free to be who I am. When I see XYZ, I feel that my choices were based on my true interests and values.	Thomson (2006) Sheldon et al. (2001)
Fulfillment of relatedness needs	XYZ makes me feel cared for. I feel close with XYZ. I feel close and connected with other people who are important to me.	
Fulfillment of competence needs	Generally, XYZ makes me feel very capable and effective. XYZ makes me feel inadequate or incompetent When I see XYZ, I feel that I am successfully completing difficult tasks and projects.	
Self-efficacy	If someone opposes me, I can find the means and ways to get what I want. It is easy for me to stick to my aims and accomplish my goals. I am confident that I can deal efficiently with unexpected events.	Schwarzer and Jerusalem (1995)
Life satisfaction	In most ways, my life is close to my ideal. The conditions of my life are excellent. I am satisfied with my life.	Diener et al. (1985)

Table 3 The results of reliability and validity test

Factor	Item	EFA		CFA		
		Cronbach's α	Factor loading	Estimate (<i>t</i> value)	Composite reliability	SMC
Factor 1	ARC 1	0.673	0.518	0.674	0.761	0.455
	ARC 2		0.745	0.639 (8.103)		0.409
	ARC 3		0.836	0.589 (7.669)		0.347
Factor 2	Attachment 1	0.782	0.769	0.658	0.844	0.741
	Attachment 2		0.812	0.809 (10.163)		0.655
	Attachment 3		0.839	0.758 (10.013)		0.433
Factor 3	Self-efficacy 1	0.703	0.821	0.790	0.872	0.625
	Self-efficacy 2		0.735	0.614 (8.872)		0.376
	Self-efficacy 3		0.755	0.686 (9.567)		0.470
Factor 4	Life satisfaction 1	0.861	0.888	0.896	0.928	0.802
	Life satisfaction 2		0.835	0.771 (14.694)		0.595
	Life satisfaction 3		0.860	0.804 (15.338)		0.646

It is noted that CMIN/DF= Relative Chi-square, NFI= Normal Fit Index, CFI= Comparative Fit Index, IFI= Incremental Fit Index, TLI= Tucker and Lewis Index, and RMSEA= Root Mean Square Error of Approximation

Before major results are discussed, the results from correlational analysis and the overall fit of our model will be presented. Hypotheses are tested by interpreting the coefficients of paths in the linear structural equation model.

Correlational Analysis

Correlations among the major variables, fulfillment of A-R-C needs, hero attachment, self-efficacy, and life satisfaction all turned out to be significant as shown in Table 4. The fulfillment of A-R-C needs is correlated most significantly with hero attachment ($r=0.448, p<0.01$). The fulfillment of A-R-C needs is also significantly related with self-efficacy ($r=0.405, p<0.01$) and life satisfaction ($r=0.300, p<0.01$). We also found that the correlation between hero attachment and self-efficacy was significant

Table 4 Correlation, Mean and SD

Variables	1	2	3	4
1. A-R-C need fulfillment by hero	1			
2. Hero attachment	0.448*	1		
3. Self-efficacy	0.405*	0.234*	1	
4. Life satisfaction	0.300*	0.177*	0.393*	1
Mean	4.64	5.51	5.18	4.56
SD	0.955	1.06	1.00	1.25

* $p<0.01$

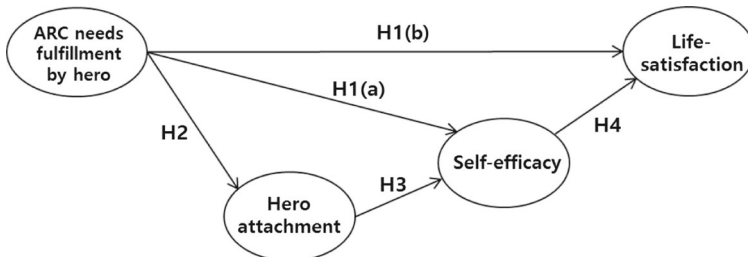
($r=0.234, p<0.01$) as well as the correlation between self-efficacy and life satisfaction ($r=0.393, p<0.01$). The correlation between hero attachment and life satisfaction was found to be significant as well ($r=0.177, p<0.01$). As shown later, further analysis showed that the effect of hero attachment on life satisfaction was fully mediated by self-efficacy.

The result of correlation analysis is generally consistent with our major hypotheses. We proceed to the linear structural equation model to formally test the hypotheses.

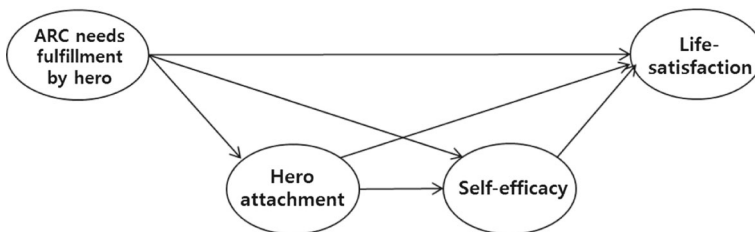
Fit of Research Model

Our proposed research model to test hypothesized effects was specified in Fig. 1. The model includes not only the direct link between A-R-C need fulfillment and life satisfaction but also the indirect link through hero attachment to life satisfaction. Our focus was to examine the effect of hero attachment on life satisfaction through self-efficacy. Path analysis was conducted to estimate using structural equation modeling by the AMOS program. The measures of overall fit mostly meet the conventional standard, which suggests that the model fits the data well (CMIN/DF=2.321, CFI=0.944, NFI=0.908, IFI=0.945, TLI=0.911, and RMSEA=0.067).

Before we conducted a detailed analysis with our model, we tested if our model was better than the best available rival model, which is shown in Fig. 1. The rival model was chosen because it was considered the most realistic and conceptually sound one to compare with. The rival model includes two more links than our model; between A-R-C need fulfillment and self-efficacy and between hero attachment and life satisfaction.



(a) Our proposed model



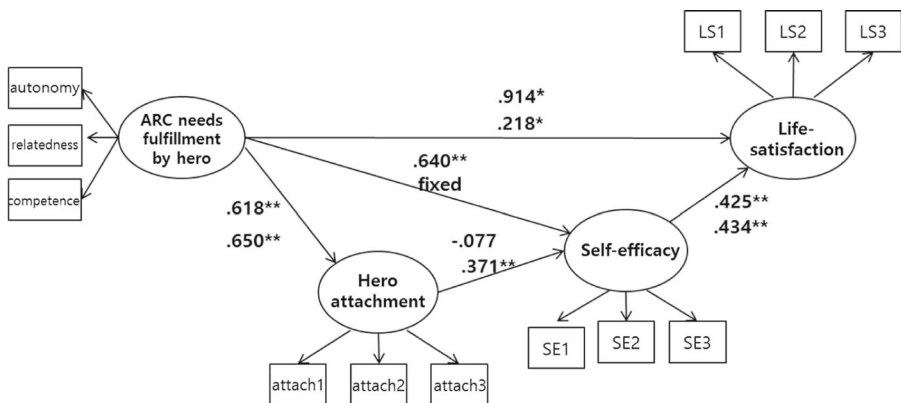
(b) Rival model

Fig. 1 Our proposed model versus the rival model. **a** Our proposed model. **b** Rival model

We compared in terms of model fit, percentage of the model's statistically significant parameters, theoretical interpretation of the paths, and parsimony (Algesheimer et al. 2005). The overall fit for the rival model was about equal to that of our proposed model (CMIN/DF=2.308, CFI=0.946, NFI=0.910, RFI=0.872, TLI=0.912, and RMSEA=0.067). Our statistical test for difference showed that the model fit of the rival model is not significantly superior to that of our model. In terms of the estimated parameters, 80 % (4 of 5) of the paths were significant in our proposed model, whereas only 66 % (4 of 6) of the paths were significant in the rival model. Furthermore, two of the paths in the rival model were not consistent with theoretical sense. We also found that our proposed model is superior to the rival model in terms of parsimony. The number of parameters to be estimated was less for our model than the rival model. Therefore, we concluded that our proposed model is significantly superior to the competing rival model. We proceeded to the main analysis for hypothesis test with confidence.

The results of estimating the proposed model using a linear structural equation method are presented in Fig. 2. As part of getting reliable test results, we estimated the proposed model twice. First, we ran the analysis to estimate the coefficients with full specification, allowing all parameters free to be estimated. All the coefficients except for H3 were in the right direction as expected. As indicated in the correlation matrix, however, we ran into a multi-collinearity problem in the estimation. Specifically, the high correlation between the A-R-C need fulfillment and hero attachment ($r=0.448$), as shown in Table 3, was found to cause an estimation error in one of the two coefficients, the effect of hero attachment on self-efficacy in our case.

As part of obtaining a reliable estimation for the variable under the high correlation, we followed the recommendation by Maddala and Lahiri (2009) to fix one of the variables which cause a multi-collinearity problem as a positive constant in the estimation. According to the guideline, it was reasonable to fix the effect of the A-R-C need fulfillment on self-efficacy as a positive constant because both theory and data (high correlation) support that its effect is significant and positive. As a result, the model allows all the parameter to free to be estimated except for the variable for the effect of the A-R-C need fulfillment on self-efficacy, assuming that it is positive. The



$^{**}p < .001$, $^*p < .05$

Fig. 2 The major result of structural equation modeling analysis. $^{**}p < 0.001$, $^*p < 0.05$

modified model is theoretically sound and also fits the data well (CMIN/DF=2.903, CFI=0.918, NFI=0.883, IFI=0.920, TLI=0.872, and RMSEA=0.080). A comparison test on the goodness-of-fit of this model with that of the originally proposed one showed that this model is about equal to the originally proposed model in terms of fit. However, considering all other criteria in terms of percentage of the model's statistically significant parameters, the theoretical interpretation of the paths, and parsimony, the modified model is superior to the originally proposed model (Algesheimer et al. 2005). The estimation results from the modified model were reported below those from the originally proposed model in Fig. 2. Testing hypothesis is performed by combined examination of the two estimation results.

The Results of Hypothesis Test

Hypothesis 1 stated that the fulfillment of A-R-C needs by a hero has a direct, differential effect on life satisfaction. Both of our estimation results show that the path coefficients for the effect of fulfilling A-R-C needs on self-efficacy and life satisfaction are significant, which supports hypothesis 1. This result is important because our results show that a hero's contribution to A-R-C need fulfillment, not the overall A-R-C need fulfillment, has a direct, incremental effect on self-efficacy and life satisfaction.

Hypotheses 2 through 4 show how the perceived help of a hero in fulfilling needs indirectly influences life satisfaction particularly through hero attachment and self-efficacy. Our analysis focused on the role of hero attachment between the A-R-C need fulfillment and life satisfaction. First, hypothesis 2 stated that the fulfillment of A-R-C needs has a positive effect on hero attachment. Our analysis result, especially the first analysis, showed that the path between A-R-C need fulfillment by a hero and hero attachment shows a significant positive relationship between them. Specifically, the coefficient for the A-R-C need fulfillment was significant, confirming hypothesis 2. Although there was a multi-collinearity problem, the estimation result is considered reliable and in the correct direction. To see if each need fulfillment has a significant contribution to hero attachment, we performed an additional study in which the three A-R-C need fulfillments were included separately in the model. We found that fulfillment of all the three A-R-C needs are significantly related to building a strong hero attachment.

Hypothesis 3 proposed that hero attachment has a positive effect on self-efficacy. Based on the estimation results after fixing the multi-collinearity problem, the coefficient of the path between hero attachment and self-efficacy shows a significant positive relationship between the two. It confirms that stronger attachment to a hero leads to higher self-efficacy.

Finally, hypothesis 4 proposed that self-efficacy will have a positive effect on life satisfaction. Both of the estimation results for the path between self-efficacy and life satisfaction show a significant positive relationship between them. The result supports hypothesis 3, confirming that self-efficacy significantly and positively influences people's life satisfaction.

In addition, although it is not formally hypothesized, we tested if hero attachment has a direct effect on life satisfaction. The result turned out that the relationship between hero attachment and life satisfaction is not significant ($\beta=0.078$, C.R.=0.912). This suggests that the effect of hero attachment on life satisfaction is fully mediated by self-efficacy.

The Result of Testing the Mediation Effect of Self-efficacy

We formally tested if hero attachment enhances life satisfaction through self-efficacy. As Baron and Kenny (1986) suggested, for the complete mediation effect to exist, four conditions must be met. First, hero attachment should have a significant influence on life satisfaction. Second, hero attachment must be significantly related to self-efficacy. Third, self-efficacy must have a significant relationship with life satisfaction. Finally, the relationship between hero attachment and life satisfaction should become zero or non-significant when the role of the mediator, self-efficacy, is accounted for in the process (James and Brett 1984; Baron and Kenny 1986).

The test process suggested by Muller et al. (2005) can be formally represented in equations as follows:

$$Y = \alpha_{10} + \beta_{11}X + \varepsilon_1 \quad (1)$$

$$Me = \alpha_{20} + \beta_{21}X + \varepsilon_2 \quad (2)$$

$$Y = \alpha_{30} + \beta_{31}X + \beta_{32}Me + \varepsilon_3 \quad (3)$$

Where Y is the level of life satisfaction and X is the level of hero attachment. Me stands for the mediator, the level of self-efficacy. The α_{10} , α_{20} , and α_{30} are the constant terms to be estimated while β_{11} , β_{21} , and β_{31} are the coefficients to be estimated and represent the strength of the effect for the four processes.

The existence of the mediation effect by self-efficacy requires four conditions to be met in the analysis of the equations:

- 1) In Eq. 1, there must be an overall treatment effect on the outcome variable; that is, β_{11} is significant.
- 2) In Eq. 2, there must be a treatment effect on the mediator; that is, β_{21} is significant.
- 3) In Eq. 3, there must be an effect of the mediator on the outcome controlling for the treatment; that is, β_{32} is significant.
- 4) In Eq. 3, the residual direct effect of the treatment variable on the outcome (β_{31}) should be smaller (in absolute value) than the overall treatment effect in Eq. 1 (β_{11}).

We performed the mediation test according to the above procedure. The mediation analysis revealed that the effect of hero attachment on life satisfaction is mediated by self-efficacy. Specifically, there was a positive effect of hero attachment on life satisfaction ($\beta=0.207$, C.R.=2.921, $p<0.01$). Also, the effect of hero attachment on self-efficacy is a significant ($\beta=0.325$, C.R.=4.039, $p<0.001$). The relationship between self-efficacy and life satisfaction is also positive and significant ($\beta=0.461$, C.R.=5.959, $p<0.001$). Finally, hero attachment has no significant effect on life satisfaction ($\beta=0.144$, C.R.=1.461, $p=0.089$), when self-efficacy is accounted for in the relationship and is positively related to life satisfaction. Together, we could conclude that the effect of hero attachment on life satisfaction is fully mediated by self-efficacy.

The Result for the Moderating Effect of Hero Attachment

It would be interesting to further explore if hero attachment strengthens the effect of the A-R-C need fulfillment by a hero on self-efficacy and life satisfaction. We used the multiple group structural equation modeling to test the moderating effect. To statistically test the significance of this moderating effect, we relied on a pairwise parameter comparison test. As shown in Table 5, for both self-efficacy and life satisfaction, the CR values turned out not significantly different. Therefore, we conclude that for our case, hero attachment did not have a moderating role but a mediating role between the A-R-C need fulfillment and self-efficacy and life satisfaction.

Overall Summary of Major Findings

Our analysis shows that the fulfillment of A-R-C needs by a hero has a direct, differential effect on both self-efficacy and life satisfaction. Hero attachment significantly enhances people's self-efficacy, which in turn positively influences a sense of life satisfaction in general. Our analysis also confirms that strong hero attachment is built as a person perceives that the hero fulfills his or her fundamental human A-R-C needs.

If we examine both the H3 and H4 in sequence and the result of the mediation test, we could see an interesting picture of how a person's hero attachment can positively influence life satisfaction through increasing a form of psychological capital, self-efficacy. It shows that merely establishing strong hero attachment does not necessarily increase his or her life satisfaction directly, but can do so when the intermediate construct, self-efficacy, is increased.

We can conclude that strong hero attachment can increase a person's sense of well-being, i.e., life satisfaction, when it can build the sense of "I can do" spirit, i.e., self-efficacy. This explanation is consistent with that of the broaden-and-build theory, which suggests that positive emotion (from attachment) can increase self-efficacy. More specifically, the positive emotion broadens the person's thought-action repertoires and builds enduring personal psychological resources (e.g., self-efficacy), ultimately leading to fulfillment and life satisfaction in general.

Discussion and Conclusion

The current study examined how a hero makes a positive impact on people's lives in terms of their hero attachment, self-efficacy, and life satisfaction. We examined both the

Table 5 The results of the moderating effect of hero attachment

	Hero attachment	Path coefficient	C.R.	Label	C.R. of the difference
A-R-C needs->	High	0.874	4.348*	Par_27	0.595
Self-efficacy	Low	0.695	3.117*	Par_9	
A-R-C needs->	High	0.301	1.045	Par_26	-0.620
Life satisfaction	Low	0.695	2.044*	Par_8	

direct and indirect effects that A-R-C need fulfillment by a hero has on self-efficacy and ultimately on life satisfaction. We found that a hero's contribution in fulfilling the A-R-C needs has a direct, differential effect on self-efficacy and life satisfaction. More importantly, however, the current study focused on the mediating role of hero attachment: how it is built up and how it influences self-efficacy and life satisfaction. Specifically, we found that the fulfillment of A-R-C needs by a hero significantly influences hero attachment. We also found that hero attachment positively affects life satisfaction through self-efficacy as an intermediate variable. This means that when a person feels that A-R-C need is fulfilled by a certain hero, he or she forms hero attachment, which ultimately enhances his or her life satisfaction through the increased sense of "I can."

The results of our study revealed the important role of a hero in people's self-efficacy as well as life satisfaction. Hero attachment helps people live better by providing meaning or increasing self-efficacy and life satisfaction (Frankl 1997). This is consistent with the results from existing literature on heroes, which shows that a hero influences one's quality of life in the long term while a celebrity does so rather temporarily in the short term (Jun et al. 2014).

Practical Implications

Due to the significant role that self-efficacy plays in shifting motivation, thought patterns, and behavior, our study provides implications for many areas in which quality of life can be improved. In terms of educational achievement, students with higher self-efficacy are found to expend more effort, plan better, and persist longer in their efforts than those with low self-efficacy. This is because students with high self-efficacy are more likely to believe that they can perform proficiently and hence are more likely to view challenges as surmountable rather than impossible. In addition, students with high self-efficacy would attribute success and failure to their own effort, which is believed to be in one's control, while students with low self-efficacy would attribute success and failure to innate ability or external factors, which are believed to be unchangeable and outside their control. Very often the correlation between low achievement and low self-efficacy is strong, and for the low-achieving students, building hero attachment who has surmounted similar obstacles and thrived may be a novel way to improve their self-efficacy, and hence, academic achievement.

Our study also yields many implications for public health practitioners and policy makers since self-efficacy is found to play a significant role in shifting health-related motivations, thought patterns, and behavior. Conner and Norman (2005) found that choice regarding health behavior, such as smoking, physical exercise, dieting, condom use, dental hygiene, seat belt use, and breast self-examination, are dependent on self-efficacy. As self-efficacy positively influences motivation, cognition, and behavior related to academic achievement, so it can influence whether positive health-related behavior change will be initiated by the target population, how much level of effort will be expended, and whether individuals will continue to uphold pro-health behavior despite obstacles.

The numerous implications for education and public health hint that the findings from this study can be extended and applied to improve quality of life in many other contexts, especially ones with numerous low-achieving individuals with low self-esteem. Many groups characterized by low self-efficacy may benefit from being attached to a hero as it will increase their self-efficacy. Increased self-efficacy can reduce maladaptive behavior

and promote pro-quality of life behavior. Thus, when practitioners plan campaigns or any other efforts to promote healthy behavior, coupling a message with a hero model relevant to the target population may prove to be more effective. Attachment to such heroes may lead to behavioral change that leads to an improved quality of life.

Another related implication for practitioners who employ models to promote certain motivations, thoughts, and behaviors is to consider a given model based on his or her potential to fulfill all three of A-R-C needs of the target audience. As our results show that fulfillment of A-R-C needs contribute to hero attachment, it would be ideal to employ a model who has the best potential to fulfill all three A-R-C needs. Future research can experimentally validate the advantage of using a more balanced hero over a merely competent or popular hero as a model to campaigns for behavior changes.

Theoretical Contributions and Future Research

There are significant theoretical contributions made by the current study. First, we empirically documented that the fulfillment of A-R-C needs strongly affects attachment. To the best of our knowledge, our study is the first one that empirically documented that the fulfillment of all A-R-C needs significantly influences attachment.

Second, another significant contribution of this study is the empirical evidence that heroes have significant positive influences on people's lives. As hypothesized, this study shows that a hero can deeply influence the lives of individuals in the long term. Once a person establishes hero attachment, the attachment increases the person's self-efficacy and in turn life satisfaction in general.

In sum, the current study challenges the bounds of the existing studies on people's quality of life. There has been no formal empirical study on how attachment to a human brand, particularly a hero, can enhance people's life satisfaction since Thomson (2006) suggested the topic for future research. From the angle of quality of life research, our study would be the first study to relate people's quality of life to hero attachment. Our study also goes beyond the scope of existing consumer studies on brand attachment, while previous studies have only focused on the effect of human brands on the sales or brand values of company products or services, not on the well-being of people.

In this study, we focused on how a hero affects individuals' quality of life through self-efficacy, an important psychological capital. Given the direct effect of A-R-C need fulfillment on self-efficacy and life satisfaction, our emphasis was on the mediating role of hero attachment between the A-R-C need fulfillment and life satisfaction. Although we attempted to see if hero attachment moderated between the two, we did not show the existence of its moderating role with the current data. It would be interesting to further explore the moderating role of hero attachment in a future study.

The current study focused on the case of heroes and produced several important implications. However, it would also be interesting if we compare the above results for the case of a hero with that of a general human brand or a celebrity. Frankl (1997) suggested that people pursue three types of values, which are entertainment, power, and meaning. However, not all of these three values are expected to contribute in equal terms to life satisfaction. According to Frankl (1997), of these three values,

entertainment and power values may represent relatively short-term values whereas meaning value may represent a relatively long-term value. Generally, people develop attachment to a celebrity mostly for fun, entertainment, or stress relief which are short-term benefits rather than for improving personal growth or their quality of life. However, hero attachment helps people live better lives by providing long-lasting meaning or vision. Therefore, it is expected that a hero can have a longer-term effect compared to celebrities. However, there may be an argument against the long-term effect of a hero versus a celebrity. If we believe that a hero does not generally last very long and people might switch from a hero to another hero or from having a hero to having none, the effect would not be long term. Therefore, the issue of a possible differential effect between a hero and a celebrity will be another interesting topic for future research.

Another stimulating area of future research may be looking into how hero attachment affects consumer behavior toward the brands or products that the hero is endorsing. Recently, Park et al. (2010) empirically documented that brand attachment leads to consumers' intention for behaviors from least difficult ones such as word-of-mouth to most difficult ones such as always buying and promoting. It is highly possible that having attachment toward a certain hero can produce a similar effect on consumers' behaviors for brands that the hero is endorsing. The phantom model approach would be employed to measure the specific effects in terms of direct, indirect, and total effects of important variables on both brand support behavior and consumers' life satisfaction (Macho and Ledermann 2011). The future study addressing the business issue together with the issue of consumer well-being or life satisfaction can provide significant managerial implications for marketing practitioners. These implications will help companies not only increase their profits but also enhance consumers' life satisfaction by applying human-brand-based, humanitarian marketing strategies.

Finally, although we examined life satisfaction as the primary outcome variable of attachment, looking into other well-being constructs such as psychological well-being as an outcome of attachment would also be meaningful future research. While life satisfaction is considered subjective, general well-being and psychological well-being are considered more objective and descriptive forms of well-being (Keyes 2009; Keyes and Lopez 2002). Since a hero inspires people by becoming a role model or a mentor, the hero attachment may engender a sense of personal growth and purpose in life which are considered important dimensions of psychological well-being. It is hoped that future research will help people "to find and nurture genius and talent" and "to make normal life more fulfilling" (Seligman and Csikszentmihalyi 2000). The future research on a hero and the quality of life will contribute to not only the well-being of the companies (profit and brand value) but also the well-being of consumers (quality of life, life satisfaction, and happiness) (Lee and Sirgy 2004). In sum, future research should shed more light on how influential individuals such as heroes and celebrities influence various facets of a person's quality of life.

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