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Motivation for achievement as perceived resource value in social rank theory of depression: A structural equation modeling analysis

Wai S. Tse [a,*], Jayne Wu [b], Kai-Chung Poon [c]

[a] The Chinese University of Hong Kong, Hong Kong
[b] City University of Hong Kong, Hong Kong
[c] Hong Kong Baptist University, Hong Kong

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ABSTRACT

Perceived resource value reflects individual differences in motivation to acquire resource holding potential. The individualistic achievement (IA) trait, as measured by the Sociotropy Autonomy Scale, is a suitable measure for perceived resource value, and helps understand the social rank theory of depression. The present study aims to evaluate this suggestion using structural equation modeling analysis. A total of 199 university students filled out the IA subscale of the SAS, Positive and Negative Affect Scale, Social Adaptation Self-Evaluation Scale, Rosenberg Self-Esteem Scale, and Beck Depression Inventory. As predicted, IA was significantly associated with social dominance as measured by the sum of Z-scores of self-esteem, social functioning and positive affect ($r = 0.44$) and negative emotion as measured by the sum of Z-scores of depression and negative affects ($r = -0.15$) and dominance was significantly negatively associated with negative emotion ($r = -0.47$). Structural equation modeling analysis reveals a good fit of the proposed model that IA trait increases social dominance which reduces negative emotion. Furthermore, the social dominance and negative emotion showed a reciprocal relationship. These preliminary results suggest that IA is a suitable measurement for perceived resource value of social rank theory in humans. This measurement is expected to facilitate understanding of the development of depression.

1. Introduction

According to the sociobiological perspective of social rank theory, involuntary subordinate strategy has been proposed to explain the etiology of depression (Price & Sloman, 1987). This theory states that animals living in a group have the advantage of gaining resources and increasing reproductive success in the evolutionary process. Living together exposes them to constant conflict in the competition for dominance, which is keyed to successful reproduction. Animals with dominant statuses are more successful in gaining access to food and mates, compared with those in subordinate positions. The outcomes of conflict determine the status of the animals.

Previous research has focused on examining the depressogenic effects of defeats in conflict. For example, after a tree shrew fails to foil an attack from an intruder, it develops symptoms similar to human depression, including increased cortisol levels, sleep problems, and lack of motivation (Van Kampen, Kramer, Hiemke, Flugge, & Fuchs, 2002). These same hormonal and psychological reactions to failure in conflict have been observed in other social animals, including monkeys and rats (Malatynska, 2005; Shively, 1998). This animal research evidence supports the claim that social defeat is a cause of depression. However, defeat is dependent on one's fighting capacity, referred to as resource holding potential (RHP). How RHP is developed and related to defeat and depression in humans has received minimal attention.

Price and Sloman (1987) suggested three elements of fighting behaviors: RHP, resource value, and ownership. RHP is speculated to be an evaluation of one's fighting capacity for achieving dominant status in confrontations with opponents. In animals, RHP is suggested to be related to size, strength, and skills. Similar to what happens in animals, actual physical fighting behaviors might still be useful for acquisition of dominance in humans. Humans have become more civilized and have since lived in a more complex social environment. Therefore, engagement in actual physical fights for the purpose of dominant status acquisition is less common. Instead, humans try to win social competitions by attempting to reach highly valued personal goals, such as acquiring more wisdom, knowledge, or moral superiority (Zuroff, Fournier, & Moskowitz, 2007). In animals, ownership refers to residents of a given territory successfully deterring intruders. In humans, ownership is related to one's ability for achievement (Gardner & Price, 1999). Winning in social competition helps humans earn higher

* Corresponding author. Address: Centre for Health Behaviours Research, School of Public Health and Primary Care, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong.
E-mail address: tsewai11@hotmail.com (W.S. Tse).

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salaries, find preferred partners and friends, and secure promotion to higher social positions. Furthermore, having a high achievement in certain specific areas might more likely lead to winning and results in recognition and support from their peers. Thereby, it enhances their social rank (Williams & DeSteno, 2008).

Gilbert (1992) used the term social attention holding power (SAHP) to describe the capacity of humans to attain higher social ranking. To reach these highly valued personal goals, persistently pursuing these goals in spite of difficulties is important. Social rank theory states that perceived resource value is a motivation for goal achievement; thus, it reflects one's sensitivity to rewards and positive affects (Gilbert, 2006). This concept is similar to the behavioral approach system (BAS) which is a motivational system important for goal-directed behaviors (Gray, 1982). Low BAS was found to be a predictive factor for the future depression (Beevers & Meyer, 2002; Kasch, Rottenberg, Arnow, & Gotlib, 2002). These findings suggest that high achievement motivation might be a protective factor against depression. The perception of the importance of reaching personal goals is shaped by psychosocial developmental processes (Cloninger, Svrakic, & Przybeck, 1993). Therefore, it is conceivable that individual differences exist in the motivation to pursue highly valued personal goals. According to the RHP formula proposed by Price and Sloman (1987), perceived resource value determines actual social attention resource holding. With higher perceived resource value, a person is more persistent and willing to withstand difficulties to attain these personal goals. By contrast, a person with lower perceived resource value easily gives up in the process of reaching his or her goals (Briffa & Sneddon, 2010). Therefore, individual differences in the motivation to achieve highly valued personal goals are predispositional factors determining actual social attention holding potential and social rank. Yet, no measurement specific to these individual differences exists.

The individualistic achievement (IA) trait, as measured by the Sociotropy and Autonomy Scale (SAS; Clark & Beck, 1991), is a suitable measurement for individual differences in perceived resource value. By examining the 14 items of the IA scale, such as " I enjoy accomplishing things more than being given credit for them," "Completing a task is the most satisfying experience of my life," "If a goal is important to me, I will pursue it even if it may make other people uncomfortable," "When I achieve a goal, I get more satisfaction from reaching the goal than from any praise I might get," "The possibility of being rejected by others for standing up for my rights would not stop me," and "I am not influenced by others in what I decide to do," one's sense of importance and determination to achieve goals are measured. In studying factors influencing sport performance, students with the motivation emphasizing goal achievement instead of acquisition of praise from others is more adaptive for their performance (Bortoli, Bertollo, & Robazza, 2009). The higher the individual's goal achievement motivation is, the better their performance will be. Because of their high performance, persons with high motivation on goal achievement will be more likely to be successful. Their success will help them to gain more acceptances and they will be highly regarded by others.

Empirical findings also suggest that motivation for achievement is related to social attention holding potential. Uskul and Greenglass (2005) found that active achievement of challenging goals enhances life's satisfactions. Bluen, Barling, and Burns (1990) reported that the aspiration for high achievement is associated with better job performance and higher job satisfaction. The IA trait is positively related to social functioning, including social support and psychological well-being (Bieling, Beck, & Browns, 2000; Clark, Steer, Haslam, Beck, & Brown, 1997). Together with item analysis, we hypothesize that the IA trait, as measured by the SAS, can be a suitable measurement for perceived resource value.

The present study aims to examine this hypothesis. Based on the discussion above, high IA scores are related to social dominance including social functioning, self-esteem, and positive affects. According to the animal work, dominant members would have more alliance, and they are more energetic (Ostner, Heistermann, & Schülke, 2008). Furthermore, dominant trait was found to be positively associated with self-esteem in humans (Zuroff, Fournier, Patall, & Leybman, 2010). Taking together, social dominance could be reflected by these three measures: social functioning, self-esteem and positive affects. As described by social rank theory, individuals with less SAHP experience more negative affects and are more vulnerable to depression. However, negative affects and depression are triggered only after experience of social defeat. Thus, it is predicted that social dominance will be the mediation step between IA trait and negative emotion including depression and negative affects. In addition, a vicious cycle relationships between depression and self-esteem and between depression and social functioning were found in previous research (Potthoff, Holahan, & Joiner, 1995; Silverstone & Salsali, 2003, respectively). It was observed that low self-esteem and low social functioning are risk factors for depression and the presence of depression further worsens self-esteem and social functioning. Thus, a reciprocal relationship between negative emotion and social dominance is set in our original model. As suggested by this reciprocal relationship, negative emotion could play a role as the mediation step between IA and social dominance instead of being the final outcome. Therefore, an alternative model showing this relationship is proposed.

2. Methods

2.1. Participants

A total of 199 university students studying an introductory psychology course (118 males and 81 females) were recruited in the University. They took part in the study in exchange for course credit. The age of the participants ranged from 18 to 37 (age 18–20 $n = 83$, age 21–23 $n = 97$, age 24–29 $n = 14$; age 30–37 $n = 5$). To minimize type II error due to extreme cases, the exclusion criteria include previous or current history of psychiatric illness, and current physical illness. None of the participants was excluded from the study due to these criteria. All volunteers provided written consent. The study was approved by the University Ethics Committee.

3. Questionnaires

3.1. Personality

The IA subscale of the revised SAS (Clark & Beck, 1991) is a 14-item self-report personality questionnaire on a five-point Likert scale. It is used to measure individualistic achievement traits ($\alpha = 0.68$). The scores range from 14 to 70. Items of IA include "Completing a task is the most satisfying experience of my life," and "If a goal is important to me, I will pursue it even if it may make other people uncomfortable."

3.2. Social dominance and negative emotion

Social dominance includes social functioning, self-esteem and positive affects and negative emotion is composed of depression and negative affects.

3.3. Social functioning

Social functioning was evaluated through the Chinese version of the Social Adaptation Self-Evaluation Scale (SASS) (Bosc, Dubini, & Polin, 1997; Tse & Bond, 2007), which is a 20-item self-report