

Relationship between attributional style and personality traits and role of gender differences

Rahmi Saylik¹

Received: 25/09/2017

Accepted: 29/11/2017

Online Published: 01/12/2017

Abstract

A number of studies in the field of psychology found that negative and positive attributional styles leads different cognitive differences. Also, personality related studies found neurotic and extrovert types have found similar cognitive differences as in attributional styles. Although, the related literature shows similarities in terms of empirical findings, the studies about the relationship between these concepts are sparse. Importantly, as we observe gender differences may lead distinct influences in emotion, cognition as well as in daily life, it is important to include role of gender differences in the potential relationship between attributional style and personality types. Therefore, in the present study we include gender differences as well to investigate relationships between these concepts. Overall, we aim at investigating relationship between attributional style and personality by putting into account gender differences. To do that, 110 (50 Women, 60 Men) were employed to fill attributional style questionnaire and Eysenck personality questionnaire. As a result, negative attributional style was positively correlated with neurotic personality whereas positive attributional style was positively correlated with extravert personality. These correlations were stronger in men than in women. However, no significant correlations were found between attributional styles and psychotic personality. We concluded that there is a potential relationship between attributional styles and neurotic and extravert personality types and this relationship may be moderated by gender differences as evident by strong correlation between this concepts in men.

Keywords: Attributional style, pessimistic and optimistic, personality types, neurotic, extravert

1. Introduction

Attributional styles and personaly traits play an important role regarding individual differences which influence people attitudes, emotions in daily lifes such in in school or working places (Chan, Norbury, Goodwin & Harmer, 2007; Beck, Rush, Shaw, & Emery 1979; A. M. Mahasneh, Z. H. Al-Zoubi, & O. T. Batayeneh, 2013). However, in the field of psychology attributional styles and personality traits have been investigated in independent studies so that the relationship between these concepts has n't been investigated sufficiently.

¹ Division of Psychology, Faculty of Sciences and Arts, Mus Alparslan University, Mus, Turkey,
Rahmi.Saylik@Brunei.ac.uk

Particularly, gender differences regarding this relationship is widely ignored. Therefore, in the current study, the relationship between attributional style and personality traits were investigated by putting in the account the potential role of gender differences. The reason for that in the society women and men were attributed with different roles and empirical studies suggest that women and men differ regarding affective and cognitive processes (Alloy, Lipman, & Abramson, 1992; D. A. M. Mahasneh et al., 2013).

The current study is consisted of four main sections which are conceptual frame work, method, results and discussion. In the first section the study has been introduced and conceptual frame work has been given. In the second section, method of the study which includes participants, materials and procedures were presented. In the third section, the statistical analyses interms of the relationship between these concepts were presented. Finally, in the fourth section, the results have been discussed and potential conclusions were drawn.

1.2 Conceptual Framework

Attributional style refers to how people evaluate themselves in case of either positive or negative life experiences (A. M. Mahasneh, Z. H. Al-Zoubi, & O. T. Batayeneh, 2013; D. A. M. Mahasneh, D. Z. H. Al-Zoubi, & D. O. T. Batayeneh, 2013). There are two main attributional styles which are negative and positive attributional styles. Some studies used the term pessimistic attributional style instead of negative one and the optimistic attributional style instead of positive attributional style (Helton, Dember, Warm, & Matthews, 1999; Levens & Gotlib, 2012; Maruta, Colligan, Malinchoc, & Offord; James L. Szalma, Hancock, Dember, & Warm, 2006). People who generally tend to blame themselves for negative events, believe that such events will continue indefinitely and let such events affect many aspects of their life display what is called a [pessimistic](#) explanatory style (Mahasneh, Al-Zoubi and Batayeneh 2013). (Alloy, Lipman, & Abramson, 1992; D. A. M. Mahasneh et al., 2013). In contrast, People with positive attributional style are more likely to challenge, do not easily give up and often tolerate them self in case of negative events. Therefore, the attributional styles influence affective, cognitive and behavioural processes which influence daily lifes (Helton, Dember, Warm, & Matthews, 1999; Levens & Gotlib, 2012; Maruta, Colligan, Malinchoc, & Offord; James L. Szalma, Hancock, Dember, & Warm, 2006). In this context, a number of studies found negative attributional style leads lower school achievements, worse affective and cognitive performance, and psychological disorders such as depression and anxiety as compared to positive attributional style (Dykema et al., 1995; Johnson and Miller, 1990).

Another the important moderator of individual differences is personality traits (H.J. Eysenck, 1967; H.J. Eysenck & S.B. Eysenck, 1975). Personality refers to characteristic patterns of behaviours, emotions and temperament and how these traits differ among individuals (H.J. Eysenck, 1967; H.J. Eysenck & S.B. Eysenck, 1975). Similar as attributional styles, personality has been divided in different types or traits. Although, numerous studies proposed several personality traits, most of affective and cognitive studies related to personality used Eysenck personality questionnaires which proposed three main personality traits. These are extravert/introvert, neuroticism/stable and psychotic/socialization (Stuhrmann,

Suslow, & Dannlowski, 2011; Sawada, Şato, Üono, Kochiyama, Kubota, Yoshimura, & Toichi, 2016; Andriç et al., 2016; Chan, Goodwin, & Harmer, 2007). Neuroticism refers to emotional instability and inclination of psychological disorders whereas extravert means being social, talkative ve confident. Finally, psychotic refers to being aggressive, egocentric, and dogmatic (H.J. Eysenck, 1967; H.J. Eysenck & S.B. Eysenck, 1975).

Various investigations have about attributional styles and personality traits have shown that both influences affective and cognitive processing in similar way (H.J. Eysenck, 1967; H.J. Eysenck & S.B. Eysenck, 1975). Particularly, nerotic personality trait as compared to extravert personality trait and negative attributional style as compared to positive attributional style found to be associated with lower performance in working places and school life, lower cognitive functioning in working memory tasks, faster responses toward negative emotional stimuli (Chan, Norbury, Goodwin & Harmer, 2009; Chan, Norbury, Goodwin & Harmer, 2007, Eysenck, 1967).

Furthermore, both neuroticism and negative attributional style found to be main precipitating factor of psychological disorders such as depression and anxiety (Haas, Constable, & Canlı, 2008; Chan, Norbury, Goodwin & Harmer, 2009; Chan, Norbury, Goodwin & Harmer, 2007; Beck, Rush, Shaw, & Emery 1979, Eysenck, 1967). Both concepts found to be involve in lower self esteem, self confidence and worry Dykema et al., 1995; Johnson and Miller, 1990; Anderson, 1991; Sanjuan and Palomares, 1998; Romney, 1994).

In addition, in the field of experimental psychology, there are similiarities regarding results in the studies which investigate either personality or attributional styles. For instance, neurotic individulas were found to be slower on working memory tasks as compared to low neurotics (Derakshan & Eysenck, 2009; M. W. Eysenck et al., 2007; M. W. Eysenck & Derakshan, 2011). They were faster in responding emotional stimuli in the emotion recognition tasks due to attentional biases (Gür et al. 1992; Bouhuys et al. 1999; Surguladze, Young, Senior, Brébion, Travis, & Phillips, 2004). In line with that, individuals with negative attributional styles were tested in the similar tasks in separate studies which showed negative attributional style as well associated with lower working memory performance and faster response in emotional faces (Helton et al., 1999; Levens & Gotlib, 2012). These findings has been confirmed in the neuroimaging studies that showed both negative attributional style and neurotic personality had similar brain activations during processing of those tasks (Ashby et al., 2002; Hancock & Szalma, 2008; Saylık, 2017; James L. Szalma et al., 2006).

Regarding gender differences, previous studies showed that women and men could be differ regarding attributional and personality types (Duff & Hampson, 2001; Harness, Jacot, Scherf, White, & Warnick, 2008; Kaufman, 2007; Owen, Downes, Şahakian, Polkey, & Robbins, 1990). For instance, Costa et al., (1980) showed women are more incline to neurotic personality whereas men are more incline in extravert personality trait in a large sample i.e 23000. Some studies found that women are more anxious, stressfull and emotional as compared to men so that they are more incline negative attributional style (Cheng and Furham, 2001). To date, there hasn't been found a sufficient study which investigate gender differences regarding relationship between attributional style and personality so that in the current study the role of gender difference was also investigated.

Despite of a significant number of studies related to attributional style and personality, there hasn't enough studies to show relationship between attributional styles and personality by including role of gender differences. Because there are similarities in empirical studies related to personality and attributional style, it is reasonable to predict a potential correlation between these concepts. However, it is important that, this potential prediction need to be investigated in a scientific manner to be referenced in the literature. Therefore, the aim of the present study to investigate relationship between attributional style and personality and role of gender differences. To test this, attributional style questionnaire which is developed by Seligman (1984) and Eysenck personality questionnaire (1976) was selected. The reason for selection of these questionnaires is that previous empirical studies given in above paragraphs mostly used these questionnaires. The first hypothesis to be tested is that neuroticism will positively associate with negative attributional style whereas extraversion will positively associate with positive attributional style. The second hypothesis is that women and men will be differentiated in the correlation between attributional style and personality.

2. Method

2.1. Participants

One hundred ten participants (50 female, 60 males, i.e. genders were matched as 45% females and 55% males) aged 18 to 56 ($M = 22.70$ years, $SD = 6.20$) from Brunel University took part the study. Based on self-report measures, the participants have no past or current psychiatric or neurologic disorders. Based on the reports of Edinburgh Handedness Inventory (Oldfield, 1971) all participants were right-handed (Oldfield, 1971). In all participants, predicted IQ was higher than 70 according to National Adult Reading Test II (NART II) (NART II; Nelson, 1982). Participants gave a written informed consent just before participation. The experiments took 30 mins. The Department of Life Sciences ethics committee at Brunel University approved the study.

2.2. Materials

2.2.1. Attributional Style Questionnaire (Seligman, 1984)

Attributional Style Questionnaire that includes series of hypothetical events which six are positive and six are negative scenarios was used to determine scores related to negative attributional style in all participants. Participants were asked to imagine these events and how they would react in the scenarios thus they are expected to describe the cause of events and asses this causes regarding three dimensions of attributional style which are internality; stability; and globality. While internality measures the degree of cause as internal or external; stability indicates whether the cause is perceived as transient or permanent. Lastly, globality refers to extent of the cause whether this affects other parts of life. Overall scores of three dimensions composites scores for three main components which are the positive attributional style and negative attributional situations. In detail, negative and positive scores range from 3 to 21 that refers to intensity and greatness of negative or positive attribution by getting the higher

score. In the current research, we have used negative attributional style as the independent variable.

2.2.2. Eysenck Personality Questionnaire (Eysenck, 1976)

Neuroticism scale of Eysenck Personality Questionnaire (EPQ) has been used to obtain neuroticism level for each participants (H.J Eysenck & S.B. Eysenck, 1975). To avoid potential confounding effects from depression, participants with a BDI (Beck, Epstein, Brown, & Steer, 1988) score of 15 or higher were excluded. A self-designed questionnaire was used to exclude participants who had a history of psychiatric or neurological illness. Also, an alcohol and caffeine consumption survey were used to exclude possible effects of alcohol and caffeine. No participant was colour blind as tested by the Ishihara colour blindness test (Ishihara, 1987)

2.3. Procedure

All participants were given time to read and sign their written informed consent and were tested individually in a cubicle room. Subsequently, participants filled the questionnaires. At the end of the study the participants were debriefed.

3. Results

The descriptive statistics such as mean and standard deviations for attributional styles and personality traits are given below in table 1.

Table 1 Yükleme biçimleri ve kişilik tipleri ile ilgili genel istatistikler

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------------|-----|---------|---------|-------|----------------|
| psychotic | 110 | 0 | 17 | 6.56 | 3.37 |
| extravert | 110 | 0 | 25 | 15.64 | 5.04 |
| neurotic | 110 | 1 | 23 | 11.96 | 5.41 |
| Negative attributiona S. | 110 | 6.17 | 18.33 | 12.26 | 2.06 |
| Positive attributiona S. | 110 | 7.50 | 18.20 | 11.77 | 2.57 |

In the current study, correlations between dimension of attributional style and personality traits were examined. The results showed that while neurotic personality trait significantly had positive correlation with negative attributional style $r = .21$, $p < .05$ whereas extravert personality trait had significantly positive correlation with positive attributional style $r = .29$, $p < .05$. However, no significant correlation was found between psychotic personality trait and dimensions of attributional style $p > .05$.

Regarding gender differences, while attributional style was significantly correlated with neuroticism and extravert personality traits, in women no significant correlations were found between dimensions of attributional style and personality traits. In more detail, in men, negative attributional style was significantly and positively correlated with neuroticism $r = .26$, $p < .05$ and positive attributional style were significantly and positive correlated with extraversion $r = .36$, $p < .05$. However, again psychoticism was not correlated with personality

both in men and women $p > .05$. Moreover, similar pattern of correlations in men were found in women however the results were failed to reach significant threshold $p > .05$.

4. Discussion

The present study aimed at investigating relationship between attributional style and personality traits and role of gender differences in this relationship. The results showed significant relationships between attributional style and effect of gender differences. In more detail, a significant and positive correlation were found between neuroticism and negative attributional style. Also, positive attributional style and extraversion found to be positively and significantly correlated. Regarding gender differences, while this significant correlation basically evident in the men, the correlations were below significant threshold in women.

The first aim of the study was to investigate overall relationship between attributional style and personality traits. The reason for that was as it has been assessed in the introduction section, there were similarities regarding empirical findings. For instance, several studies found out that attributional styles and personality traits have shown that both influences affective and cognitive processing in similar way (H.J. Eysenck, 1967; H.J. Eysenck & S.B. Eysenck, 1975). Particularly, neurotic personality trait as compared to extravert personality trait and negative attributional style as compared to positive attributional style found to be associated with lower performance in working places and school life, lower cognitive functioning in working memory tasks, faster responses toward negative emotional stimuli (Chan, Norbury, Goodwin & Harmer, 2009; Chan, Norbury, Goodwin & Harmer, 2007, Eysenck, 1967). The current results are in support of these studies as evident by significant and positive correlation between neuroticism and negative attributional style, and significant and positive correlation between extraversion and positive attributional style. However, psychoticism correlated with any dimension attributional style neither overall nor in gender differences. The potential reason for that might be that psychoticism generally had distinct features as compared to neuroticism and extraversion. In more detail, previous studies showed that neuroticism and extraversion often negatively correlated whereas no significant correlation found between psychoticism and other personality traits (Eysenck, 1967).

The second aim of the study was to investigate gender differences regarding relationship between attributional style and personality traits. Previous studies in gender differences have shown that women are more anxious, stressful and emotional as compared to men so that they are more inclined to negative attributional style (Cheng and Furham, 2001). Relying on these findings, gender differences were predicted to be a significant moderator in relationship between attributional style and personality traits because the features such as anxiety, stress emotional instability has been found to strongly associate with neuroticism and negative attributional style (Cheng and Furham, 2001; Chan, Norbury, Goodwin & Harmer, 2007, Eysenck, 1967). The results of the current study showed significant findings. Interestingly, in men significant positive correlations were found between neuroticism and negative attributional style and between extraversion and positive attributional style. Although similar pattern of results in men were found in women as well but the results did not reach significant

threshold.

One potential reason for such results regarding gender differences could be that women and men differs regarding affective and cognitive processes (Duff & Hampson, 2001; Harness, Jacot, Scherf, White, & Warnick, 2008; Kaufman, 2007; Owen, Downes, Şahakian, Polkey, & Robbins, 1990). For instance, while women usually found with anxiety and emotional instability, men were more likely to have stable emotions (Cheng and Furham, 2001). In this context, because healthy men often had more stable emotions, attributional style in men could be a trait as a part of personality. In other words, attributional style could be moderated by personality in men. On the other hand, because women could have unstable emotions, attributional style may be a state rather than a trait. In other words, attributional style may not be moderated by personality so that it could be a temporary feeling.

In conclusion, the significant correlations between attributional style and personality traits were found. Neuroticism were positively correlated with negative attributional style and extraversion were positively correlated with positive attributional style. However, psychoticism were not significantly correlated with any dimension of attributional style. While, the pattern of correlations was strogly evident in men, similar pattern of correlations were failed to reach significant thresholds in women.

References

- Alloy, L. B., Abramson, L. Y., & Francis, E. L. (1999). Do negative cognitive styles confer vulnerability to depression? *Current Directions in Psychological Science*, 8(4), 128-132.
- Anderson, S.M.: 1991, 'The inevitability of future suffering: The role of depressive certainty in depression', *Social Cognition* 8, pp. 203–229
- Ashby, F. G., Valentin, V. V., & Turken, A. U. (2002). The effects of positive affect and arousal on working memory and executive attention. *Advances in consciousness research*, 44, 245-288.
- Chan, S. W., Goodwin, G. M., & Harmer, C. J. (2007). Highly neurotic never-depressed students have negative biases in information processing. *Psychological medicine*, 37(9), 1281-1291.
- Chan, S. W., Norbury, R., Goodwin, G. M., & Harmer, C. J. (2009). Risk for depression and neural responses to fearful facial expressions of emotion. *The British Journal of Psychiatry*, 194(2), 139-145.
- Costa, P. and R. McCrae: 1980, 'Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people', *Journal of Personality and Social Psychology* 38, pp. 668–678.
- Duff, S. J., & Hampson, E. (2001). A sex difference on a novel spatial working memory task in humans. *Brain and cognition*, 47(3), 470-493.
- Eysenck, H. J. (1967). Biological basis of personality. *Nature*, 199(4898), 1031-1034.
- Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire (junior and adult)*: Hodder and Stoughton.

-
- Eysenck, M., Payne, S., & Derakshan, N. (2005). Trait anxiety, visuospatial processing, and working memory. *Cognition & Emotion*, 19(8), 1214-1228.
- Eysenck, M. W., & Calvo, M. G. (1992). Anxiety and performance: The processing efficiency theory. *Cognition & Emotion*, 6(6), 409-434.
- Eysenck, M. W., & Derakshan, N. (2011). New perspectives in attentional control theory. *Personality and Individual Differences*, 50(7), 955-960.
- Gur, R. C., Erwin, R. J., Gur, R. E., Zwil, A. S., Heimberg, C. & Kraemer, H. C. (1992). Facial emotion discrimination: II. Behavioural findings in depression. *Psychiatry Research* 42, 241–251.
- Haas, B. W., Omura, K., Constable, R. T., & Canli, T. (2006). Interference produced by emotional conflict associated with anterior cingulate activation. *Cognitive, Affective, & Behavioral Neuroscience*, 6(2), 152-156.
- Harness, A., Jacot, L., Scherf, S., White, A., & Warnick, J. E. (2008). Sex differences in working memory. *Psychological reports*, 103(1), 214-218.
- Hancock, P. A., & Szalma, J. L. (2008). *Performance under stress*: Ashgate Publishing, Ltd.
- Helton, W. S., Dember, W. N., Warm, J. S., & Matthews, G. (1999). Optimism, pessimism, and false failure feedback: Effects on vigilance performance. *Current Psychology*, 18(4), 311-325.
- Johnson, J.G. and S.M. Miller: 1990, 'Attributional, life-event, and affective predictors of onset of depression, anxiety, and negative attributional style', *Cognitive Therapy and Research* 14, pp. 417–430
- Kaufman, S. B. (2007). Sex differences in mental rotation and spatial visualization ability: Can they be accounted for by differences in working memory capacity? *Intelligence*, 35(3), 211-223.
- Osorio, L. C., Cohen, M., Escobar, S. E., Salkowski-Bartlett, A., & Compton, R. J. (2003). Selective attention to stressful distracters: effects of neuroticism and gender. *Personality and Individual Differences*, 34(5), 831-844.
- Owen, A. M., Downes, J. J., Sahakian, B. J., Polkey, C. E., & Robbins, T. W. (1990). Planning and spatial working memory following frontal lobe lesions in man. *Neuropsychologia*, 28(10), 1021-1034.
- Levens, S. M., & Gotlib, I. H. (2012). The effects of optimism and pessimism on updating emotional information in working memory. *Cognition & emotion*, 26(2), 341-350.
- Mahasneh, A. M., Al-Zoubi, Z. H., & Batayeneh, O. T. (2013). The Relationship between Optimism-Pessimism and Personality Traits among Students in the Hashemite University. *International Education Studies*, 6(8), 71.
- Mahasneh, D. A. M., Al-Zoubi, D. Z. H., & Batayeneh, D. O. T. (2013). The Relationship between Attribution Styles and Personality Traits, Gender and Academic Specialization among the Hashemite University Students. *International Journal of Business and Social Science*, 4(9).
- Maruta, T., Colligan, R. C., Malinchoc, M., & Offord, K. P. (2000). *Optimists vs pessimists: survival rate among medical patients over a 30-year period*. Paper presented at the Mayo Clinic Proceedings.

-
- Owen, A. M., Downes, J. J., Sahakian, B. J., Polkey, C. E., & Robbins, T. W. (1990). Planning and spatial working memory following frontal lobe lesions in man. *Neuropsychologia*, 28(10), 1021-1034.
- Romney, D.M.: 1994, 'Cross-validating a causal model relation attributional style, self-esteem, and depression: An heuristic study', *Psychological Reports* 74, pp. 203–207.
- Sanjuan, P. and A. Palomares: 1998, 'Analysis of attributional style in depressed students', *Estudios-de-psicologia* 61, pp. 25–33.
- Saylik, R. (2017). *Neuroticism related differences during porcessing of controlled cognitive tasks*. Brunel University London,
- Stuhrmann, A., Suslow, T., & Dannlowski, U. (2011). Facial emotion processing in major depression: a systematic review of neuroimaging findings. *Biology of mood & anxietydisorders*, 1(1), 10.
- Surguladze, S. A., Young, A. W., Senior, C., Brébion, G., Travis, M. J., & Phillips, M. L. (2004). Recognition accuracy and response bias to happy and sad facial expressions in patients with major depression. *Neuropsychology*, 18(2), 212.
- Sawada, R., Sato, W., Uono, S., Kochiyama, T., Kubota, Y., Yoshimura, S., & Toichi, M. (2016). Neuroticism delays detection of facial expressions. *PloS one*, 11(4), e0153400.