

# Predicting Dimensions of Psychological Capital Based on Humor Styles among Medical Students

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## Abstract

**Objective:** Health psychology focuses on health promotion and disease prevention. One of the factors that is related to the promotion of mental health is the sense of humor which can be influenced by the components of psychological capital. This study aims to predict the psychological capital dimensions based on the humor styles among the medical students of Tarbiat Modares University.

**Method:** This study is descriptive correlational and the statistical population consisted of all medical students of Tarbiat Modares University. The participants of the study were 120 who were selected through volunteer sampling. Data were collected by the Luthans Psychological Capital Inventory and Martin's Humor Style Scale. Data were analyzed through Pearson's correlation coefficient and multiple regression analysis.

**Results:** Results showed that self-efficacy and hopefulness have a positive significant relationship with adaptive humor styles, but the relationship between self-efficacy and hopefulness with maladaptive humor styles was negative. Also, there was no significant relationship between resilience and all four humor styles.

**Conclusion:** By strengthening adaptive humor styles, it is possible to increase the psychological capital of students to help their mental health.

**Key Words:** Hopefulness, self-efficacy, resilience, optimism, humor styles.

## Introduction

Over the past twenty years, humor has been considered as an individual feature that varies from person to person and is seen as a variable in personality research (Heintz, 2017). Most studies have emphasized the beneficial effects of humor on physical health and psychological well-being (Lefkourt, 2001; Martin, 2001). Psychologists emphasize that humor, in addition to positive results, has negative consequences and may damage the individual's personality and social competence. Thus, its positive or negative outcome varies

depending on its style (McCasker & Moran, 2012).

The concept of humor is one of the most important aspects of social communication, a personality behavior related to emotion, cognitive ability or process, interpersonal communication behavior, behavioral response and model, viewpoint and attitude towards life, adaptive strategy, and defense mechanism (Damghnian & Yazdani Ziarat, 2015). Humor styles are, in fact, defined as the behavioral tendencies associated with humor in everyday life ((Heintz & Ruch, 2001, quoted by Marín; Carrillo & Dios, 2018).

In this regard, Martin, Puhlike-Doris, Larsen, Gray, and Weir (2003), in reviewing the related literature review, demonstrated that humor predicts only a small part of the mental health variance. They believed that most of the research assessed humor as an

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absolutely positive concept, while they have ignored the undesired aspects of humor such as grinning and ridiculing others. Based on this belief, they developed a humor style questionnaire to distinguish the two adaptive (affiliative and self-enhancing) and maladaptive (aggressive and self-defeating) humor styles. A) Self-enhancing humor style helps the person to accept him/herself and does not hurt others. This style helps the person to overcome the stressful events of life and is more related to the person than to interpersonal interactions.

B) individuals with affiliative humor style tend to calm down others by telling jokes in face of stressful situations and have a humorous perspective in the situations they face. This style is more related to interpersonal interactions (Tapley, 2007). Affiliative and self-enhancing humor styles have a positive relationship with psychological well-being (Kuiper et al., 2016) and a negative correlation with anxiety, depression, and suicide thought and are interpersonal predictors of suicide (Tucker et al., 2013).

c) Aggressive humor style is a maladaptive humor style in which individuals tend to reinforce their self-conception without concerning others' well-being by mocking and humiliating them and achieve this goal by making fun of others. Although this style is temporarily useful, its repeated use weakens interpersonal relationships and the individual is excluded from society with no effective social support.

D) And finally, people with a self-defeating sense of humor look down their accomplishments and value others positively. This kind of humorous people attempt to entertain others by telling jokes and humiliating themselves. This style is a maladaptive humor style (Tapley, 2007, quoted by Khalibi Hajjvand, Ahmadi, & Kakavand, 2011). In this regard, the results of Geiger et al.'s research (2019), entitled "deficiencies in mindfulness theory for the association between borderline personality traits and maladaptive humor styles", showed that negative humor styles are related to rumination,

aggressiveness, and suicide thoughts. Borderline personality traits are directly and positively related to negative humor styles. people with more borderline characters have a more hostile and maladaptive humor style because of their lower level of non-reactive behavior. Tellen (2019) in research entitled "Managers' humor styles and employee support: A mediation model", concluded that managers' aggressive humor style has a negative relationship with employee support and the managers' sense of humor had a significant impact on managers' perceived authenticity, and finally, the relationship between supervisor's humor style and employee support was fully mediated by managers' credibility and their relationships with the employee's organization. Marín, Carrillo, and Dios (2018) also in their research entitled: Is the use of jokes related to anger management? Assessing individual differences in humor styles in Spain, concluded that increased self-humor had a higher capacity to reduce angry emotions and prevent expression of anger, and higher scores on maladaptive humor styles (aggressive and self-defeating humor) is associated with a greater tendency for expressing anger to others.

Furthermore, one of the factors that can be related to humorous styles is psychological capital. Positive psychology, as a new approach in psychology, focuses on understanding and explaining the happiness and mental well-being as well as accurately predicting the factors affecting them. Psychological capital is one of the indicators of positive psychology, which indicates a positive assessment of the situation and the probability of success based on a motivated and persistent effort (Luthans et al., 2007, quoted by Vanno, Kaemkate & Wang Vanish, 2015). The sub-components of psychological capital include optimism, hopefulness, resilience, and self-efficacy, which are increased by this concept (Luthans et al., 2004, quoted by Aliyev & Tunce, 2015). For this reason, Luthans et al., in developing a framework of positive organizational behavior in organizations,

have proposed positive psychological capital as a combined factor and a source of competitive advantage for organizations. Thus, psychological capital is composed of positive psychological variables that can be measured, developed, and nurtured, and it is possible to apply management to them (Memarzadeh, Khataei, & Abbaszadeh Maniq, 2011).

Optimism is one of the components of psychological capital that is considered as a tendency to have a positive effect on a person's mental state and the optimistic person's attribution to success in now and future is positive (Carver, Scheier, & Segerstrom, 2010, quoted by Sin, Chow, & Cheung, 2015). Optimism means generalized positive experiences that include both positive hope and expectation and a positive interpretation of events. Hope is another component of psychological capital, which means the motivation to find a way to achieve goals and the ability to use this way effectively (Lopez, 2000, quoted by Aliyev & Tunce, 2015). Resilience is a form of development in persons which enables them to deal with and stands in front of failures, disasters, and conflicts of life as well as positive events, progress, and responsibilities so that they do not give up until achieving success (Luthans et al., 2006, quoted by Memarzadeh, Khattai, & Abbaszadeh Menigh, 2011). Self-efficacy is another positive component of psychological capital that is actually a positive belief or confidence in one's ability to perform certain tasks (Banura, 1997). Self-efficacy beliefs refer to a key determinant of behaviors such as performance, goal adherence, and adaptation when a person has the necessary skills (Banura, 1997). Self-efficacy involves the persons' struggles to achieve their goals and believing in their own skills (Bandura, 1995, quoted by Aliyev & Tunce, 2015).

The results of the research conducted by liao et al. (2020) indicated that affiliative and self-enhancing humor styles were positively correlated with emotional labor, whereas aggressive and self-

defeating humor styles were negatively correlated with it. These results can raise awareness of teaching's emotional demands and encourage teacher-training and professional-development programs to improve appropriate ways, including humor in coping with workplace emotions. Also in another research, Navarro et al. (2020) concluded that online trolling also correlated with elevated use of aggressive and self-defeating humor styles and also with heightened expressions of the joy in laughing at others (i.e. Katagelasticism) and the joy of being laughed at (i.e., Gelotophilia). When applying hierarchical regressions to eliminate the redundancy among these traits, it was found that Katagelasticism incrementally explained variance ( $\Delta R^2 = 10.2\%$ ) in online trolling, even after considering gender and the Dark Tetrad (i.e., male gender and high psychopathy as main predictors:  $\Delta R^2 = 27.3\%$ ). A subsequent moderation analysis indicated that higher levels of psychopathy were related to a greater engagement in trolling behavior among those with high Katagelasticism. This research provides empirical evidence that contributes to elucidate the "dark" humorous nature of this pervasive antisocial online behavior.

The results of the research conducted by Sin, Chow, and Cheung (2015) suggested that there was a positive relationship between function and levels of stress in runners. Those with psychological capital had reported fewer levels of stress, in other words, optimistic runners who had psychological capital had lower levels of stress. In a study, Chermer et al. (2015) also showed that there was a negative relationship between adaptive and self-enhancing humor styles with borderline personality disorder, but the maladaptive and aggressive styles of humor had a positive relationship with a borderline personality disorder. Hunter, Fox, and Jones (2016) concluded that the use of humor by couples improves their interpersonal relationships. In addition, using a positive sense of humor by young people can help them make better interpersonal relationships

with their friends. Bergiem et al. (2015) in their study concluded that there is a positive relationship between psychological capital and their perceptions of climate safety in the maritime industry and job satisfaction of Norwegian maritime transport workers. Demjen (2016) concluded that humorous talking and joking have psychological effects on the cancer patients to feel the power individually and in the groups. In addition, it plays an important role in the treatment of cancer patients. Eid and Hystad (2016) in their research indicated that psychological capital as a strong predictor had a statistically significant correlation with fatigue and sleep in the samples and passengers in ships and reported a significant level of fatigue, indicating that psychological capital is an acquired and instructive concept.

The result of Sabot et al. confirms the hypothesis of 'dysfunctional sleep beliefs significantly and negatively predict PsyCap, and PsyCap mediated the relationship between sleep beliefs and well-being'. These findings suggest that PsyCap, which can be developed, may help buffer the adverse effects of sleep beliefs to benefit well-being. Replication of coefficient model in larger samples and future testing of PsyCap training within sleep-hygiene practices was recommended then. The results of the study by Falanga, Caroli, and Sagone (2016) show that there is a positive relationship between self-enhancing and affiliative humor styles with social self-efficacy, whereas there is a negative relationship between the self-defeating style and social self-efficacy. The results of the research by Kelberer, Kraines, and Wells, entitled "Optimism, Hope, and Attention to Emotional Stimulus" indicated that optimism and hope were associated with less attention to frustrating and threatening information. Optimism was associated with more attention to positive information. In addition, the model's additional indirect effects were examined. These findings confirm the relationship between optimism, hope, and attention to emotional information and suggest a potential mechanism by which these

factors reduce psychological distress. Since a large part of the society consists of students and providing their mental health is of most importance, having an adaptive humor style can play a significant role to improve hope, self-efficacy, resilience, and optimism in their mental health. So the present study aims at predicting psychological capital dimensions based on humor styles among medical students.

## Method

### Participants and Procedure

This research is a descriptive-correlational study. The statistical population of the study consisted of all medical sciences students of Tarbiat Modarres University in 2019 and 120 students were selected as participants through voluntary sampling method. The data were collected by two questionnaires that were distributed after obtaining the consent of the participants and explaining the answer instructions to them. Finally, the collected data were analyzed by SPSS version 20. In data analysis, after calculating descriptive indices (mean and standard deviation), in order to investigate the moderating effect of humor styles on personality and general health factors, the partial correlation method was used, and to investigate the relationship between humor style and mental health, multivariate regression analysis was used. Statistical analysis was done by SPSS software. Doing multivariate regression analysis requires the observance of certain assumptions. One of the assumptions is the normality of the error (residual) and the second assumption is the assumption of homogeneity of variance. Levin test was used and in this study, the assumption of homogeneity of variance was also established.

### Ethical statement

For considering ethical issues in the study, data were collected after obtaining the consent of the participants and explaining the answer instructions to them. Inclusion criteria of the present study were being a student of the department of Medical

Sciences at Tarbiat Modares University, being 18 to 40 years old, having no history of mental illness, and the exclusion criterion was incomplete filling of the questionnaires. Also, all ethical considerations, including voluntary cooperation, having a pseudonym, and having the freedom to leave the research at any time were considered for all students.

### Research measures

A) Questionnaire of Humor Styles: This questionnaire was developed by Martin et al. in 2003. It has 32 questions to measure four humor styles: affiliative and self-enhancing humor styles that are positive and adaptive styles, and aggressive and self-defeating humor styles that are negative and maladaptive (Tapley, 2007). Martin et al. (Tapley,

2007) reported its retest validity using 179 subjects (124 females and 55 males) for four subscales of affiliative, self-enhancing, aggressive, and self-defeating 0.85, 0.81, 0.80, and 0.82, respectively. Also, Biniiaz (2008) calculated the correlation with the psychological well-being questionnaire (Zanjani Tabasi, 2004) to evaluate the convergence validity of this questionnaire and reported the desirable result.

B) Psychological Capital Questionnaire (PCQ): Psychological Capital Questionnaire (PCQ) is used to measure psychological capital (Luthans, 2007). The questionnaire consists of 4 subscales and 24 items; each subscale contains 6 items. The respondents answer each item on a 6-point Likert scale (strongly disagree for score 1 to strongly agree for score 6). To calculate the psychological capital score, first

**Table 1:** Descriptive statistics of mean and standard deviation

	standard deviation	Mean
Self- Efficacy	4.768	29.64
Self-enhancing style	8.268	30.69
Affiliative style	8.156	35.58
Aggressive style	6.982	21.87
Self- defeating style	7.935	20.82
Hopefulness	5.531	27.16
Self-enhancing style	8.268	30.69
Affiliative style	8.156	35.58
Aggressive style	6.982	21.87
Self-defeating style	7.935	20.82
Resilience	4.295	24.69
Self-enhancing style	8.268	30.69
Affiliative style	8.156	35.58
Aggressive style	6.982	21.87
Self- defeating style	7.935	20.82
Optimism	3.946	24.80
Self-enhancing style	8.268	30.69
Affiliative style	8.156	35.58
Aggressive style	6.982	21.87
Self-defeating style	7.935	20.82

**Table 2:** The Summary of Multiple Regression Analysis Model (Criterion variable: Self-efficacy)

Model	Sig	standard error	Adjusted R <sup>2</sup>	R <sup>2</sup>	R
1	1	4.403	.147	.225	.474 <sup>a</sup>
Humor style Components	Sig	t	standardized coefficients	Not standardized coefficients	
			Beta	B	standard error
Constant	.000	10.556		3.425	36.153
Self-enhancement style	.285	1.083	.172	.092	.099
Affiliative style	.009	-2.729	-.458	.098	-.268
Aggressive style	.507	.670	.111	.113	.076
Self-deprecating style	.432	-.794	-.134	.102	-.081

each subscale scores are calculated one by one and then the sum of them is reported as a total score of psychological capital. Questions 13-20-23 are scored in reverse. The results of confirmatory factor analysis indicated that this test has desired factors and structures reported by the test developers. The results of factor analysis confirmed the validity of the test construct. The chi-square ratio of this test is 24.6 and the CFI and RMSEA statistics in this model are 0.97 and 0.08, respectively (Lutans & Olivo, 2007). Also in the present study, the Cronbach's alpha for the reliability of this questionnaire was reported 0.85. This questionnaire has internal psychometric properties and for the Iranian sample, the internal consistency of the whole test by Cronbach's method has been reported 0.85 (Narimani et al., 2014).

## Results

In data analysis, after calculating descriptive indices (mean and standard deviation), partial correlation method was used to measure the moderating effect of humor styles on personality and general health factors, and to investigate the relationship between humor style and mental health, Multivariate regression analysis was used. statistical analysis was done by SPSS software.

The results of simultaneous multiple regression analysis to predict self-efficacy based on the components of humor styles are presented in Tables 2, 3, 4, and 5.

As can be seen in Table 2, there is a non-significant relationship between the three humor styles (self-enhancing, aggressive, and self-defeating) with

**Table 3:** The Summary of Multiple Regression Analysis (Criterion variable: hopefulness)

Model	Sig	standard error	Adjusted R <sup>2</sup>	R <sup>2</sup>	R
1	1	5.028	.174	.249	.499 <sup>a</sup>
Components of humor	Sig	T	standardized coefficients	Not standardized coefficients	
			Beta	B	standard error
Constant	.000	7.982		3.911	31.220
Self-enhancing style	.001	2.409	.378	.105	.253
Affiliative style	.003	-2.366	-.391	.112	-.265
Aggressive style	.997	-.004	-.001	.129	-.001
Self-defeating style	.333	-.979	-.163	.116	-.114

**Table 4:** The Summary of Multiple Regression Analysis (Criterion variable: Resilience)

model	Sig	standard error	Adjusted R <sup>2</sup>	R <sup>2</sup>	R
1		4.463	-.080	.018	.136 <sup>a</sup>
Model	Sig		T	standardized coefficients	Not standardized coefficients
			Beta	B	standard error
Constant	.000	6.674		3.472	23.172
Self-enhancement style	.002	-.042	-.008	.093	-.004
Affiliative style	.004	.544	.103	.100	.054
Aggressive style	.637	.476	.089	.115	.055
Self- deprecating style	.493	-.691	-.132	.103	-.071

the predictor variable of self-efficacy (with the beta coefficient of 0.17, 0.11, and 0.13). Of the three styles of self-enhancing, aggressive, and self-defeating, they cannot predict self-efficacy, among which only the affiliative style can predict it.

The result of simultaneous multiple regression analysis to predict hopefulness components of humor styles is presented in Table 3.

As can be seen in Table 3, there is a significant relationship between the two humor styles (self-enhancing and affiliative) with the predictor variable of hopefulness (with the beta coefficient of 0.37 and -0.39), so both self-enhancing and affiliative styles can predict hopefulness. But the other two styles, i.e. aggressive and self- defeating with beta coefficient of -0.001 and -0.16, cannot predict the hopefulness variable.

As can be seen in Table 4, there is a significant relationship between the two adaptive humor styles (affiliative and self-enhancing) and the predictor variable of resilience, but the two self-defeating and aggressive styles cannot predict resilience.

As can be seen in Table 5, there is no significant relationship between the four humor styles and the predictor variable of optimism, and therefore none of the four styles can predict optimism.

### Discussion and Conclusion

The findings of the present study demonstrated that humor styles play an important role in predicting the dimensions of psychological capital. After calculating the relationship between humor styles and dimensions of psychological capital, it is observed that the relationship between self-

**Table 5:** The Summary of Multiple Regression Analysis Model (Criterion variable: Optimism)

Model	Sig	standard error	Adjusted R <sup>2</sup>	R <sup>2</sup>	R
1	1	4.018	-.037	.057	.240 <sup>a</sup>
Model	Sig		T	standardized coefficients	Not standardized coefficients
			Beta	B	standard error
Constant	.000	9.246		3.126	28.903
Self-enhancement style	.300	-1.051	-.185	.084	-.088
Affiliative style	.992	-.010	-.002	.090	-.001
Aggressive style	.983	-.021	-.004	.103	-.002
Self- deprecating style	.498	-.683	-.128	.093	-.063

efficacy and hopefulness with adaptive humor styles (self-enhancement and affiliative) is positive and significant. Also, the relationship between self-efficacy and hopefulness with maladaptive humor styles (aggressive and self-defeating) is negative and significant. As the results show, the relationship between optimism and resilience with the four humor styles is not significant; it means that none of the four humor styles can predict the optimism and resilience variables. However, there was a significant relationship between the two adaptive styles (self-enhancement and affiliative) with resilience. By referring to the results of regression analysis, it is observed that the relationship between self-efficacy and hopefulness with the two adaptive styles of humor is significant (Tables 2 and 3). This finding is in line with the results of the research of Khodabakhsh and Kiani (2013), Salehi Doost et al., (2013), and Martin (2001). In their research, they found that maladaptive humor styles had a significant and negative correlation with psychological well-being, and adaptive humor styles have a positive and significant correlation with psychological well-being.

Martin (2001) believes that humorous people are more socially skilled and capable to resolve interpersonal conflicts. The role of humor in dealing with daily stress, developing social relationships, facilitating problem-solving, and also managing emotions and motivation is important. Since a person with self-efficacy has these similar traits in personal and social affairs, it can be concluded that there is a relationship between self-efficacy and adaptive humor styles. On the other hand, there was a positive relationship between adaptive humor styles and hopefulness. It has been mentioned that people who use the affiliative humor style tend to tell jokes or funny things and entertain others, and for those with self-enhancement style, the inconsistencies of life are astonishing and entertaining and they benefit from humorous feedback in the face of the stresses and hardships of life, (Martin, 2003, quoted by Ali

Niya Karouei, 2008).

Psychological theories have emphasized that people with a healthy mind are more likely to use jokes, which is part of mental health. Freud considered humor to be one of the best defensive mechanisms against anxiety. Rogers also included jokes in the list of characteristics of self-fulfilling prophecies. Some theories see it as an aesthetic response, while others see it as a helpful way to deal with stress. But new approaches look at this relatively positive structure with a more scientific and accurate perspective. An article published in the prestigious journal *Research in Personality* in 2003 concluded that not all types of humor have a positive relationship with mental health. After reading previous articles, they concluded that there must be a reason why humor has a weaker relationship with mental health than other structures, such as being optimistic or having faith or having strong social support.

Other results demonstrated that there was no significant relationship between optimism and different styles of humor. Also, two adaptive styles (self-enhancement and affiliative) have a significant relationship with the resilience variable (Table 4 and 5). These findings are in line with the results of Naderi et al.'s research (2010). In their research, they demonstrated that there was no significant relationship between humor and optimism. Optimism is one of the positive traits of human beings and for the past two decades, psychologists and social scientists paid special attention to it. Optimism and, in general, positive beliefs affect human illness and mental and physical health greatly (Peterson, 2003, quoted by Naderi et al., 2010). Optimism affects physical and mental health, but research has demonstrated that it does not have a certain relationship with the sense of humor. These results are also inconsistent with the results of Bales (2008), Luthans, Lebsack, and Lebsak, (2008), and Torghe et al., (2015). In explaining these findings, when individuals with high levels of self-efficacy and hopefulness psychological capital

(use the humor styles that are compatible with their personality traits in the social interaction, the quality of their relationships is better than the times they use incompatible styles. For example, when individuals with self-efficacy and hopefulness use the aggressive humor style that is incompatible with their personality, they may experience more negative emotions in their communication feedback.

Regarding the resilience variable, the results demonstrated that there is no relationship between resilience and humor styles. These results are in line with the findings of Salehi Dost et al. (2013) (and Torghe et al. (2015). Positive psychology basically studies human capabilities to identify factors enhancing mental health. Some of the human abilities that are related to personal characters and natures have psychological aspects that help individuals perceive potentially threatening events or control their reactions in such events (Golsmith, et al., 2018). Psychological capital comes from positive psychology. The results of Wersebe et al.'s (2018) study showed that people with high psychological capital have a lower psychological disorders compared to people with lower capital level by using alternative adaptive and specific solutions, which in turn leads to higher mental health. Research has shown that psychological capital, in addition to functioning, affects a wide range of attitudes, feelings, emotions, perceptions, and behaviors, and can even affect the health of individuals in various ways. Various research on the four main components of psychological capital has shown that these components are able to explain the level of physical and mental health of individuals and, ultimately, lead to their well-being (Lutans, 2014, quoted by Ghaedi, 2018).

In addition, humor is a coping strategy to overcome anxiety and depression. Humor is a way to deal with life's problems. It is a survival skill to get away from a problem. Some research demonstrated that humor can be an important coping skill in confronting life's problems. In a review of research on humor and

health, researchers found the following results about the value of humor as a coping skill. Humorous people in face of stressful experiences show less negative moods than others. Humor is an effective way to deal with negative emotions such as anger, sadness, and depression. People with a sense of humor, most likely, try to control their negative emotions, in contrast, people who have no sense of humor are more passive and allow their negative emotions to control them (Reff, 2006).

### Research Limitations

The limitations of the present study in interpreting the findings cannot be ignored. On the one hand, this research has been done on student samples that may not be a good representative for the whole society and it is difficult to generalize the results. On the other hand, research is correlational and causal interpretation of data is not possible. In other words, it is not clear whether humorous styles in this unbalanced way predict the dimensions of psychological capital. It seems necessary to conduct experimental research by controlling the intervening variables in order to examine these relationships. Possible problems related to the validity of the tests and the ways they are administered in this study should not be overlooked. Moreover, self-assessment tools (questionnaires) have been used only on medical students, which makes it difficult to generalize to other populations. In line with the present study, it is suggested that this research be repeated in other communities. This approach is suggested to be worked on as an intervention (experiment), and finally the dimensions of psychological capital with other variables should be done on medical and other students.

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