

Psychodynamic Network Structure Of Enneagram Personality Types And Healthy Personality In Male University Students

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Abstract

Enneagram typologies can impact psychological well-being and stressful situations in college students. However, the literature is still limited on the study of the psychodynamic functioning of personality types in Spanish-speaking population, being necessary a better understanding from the network system. The objective was to analyze the network associations and centrality measures of the Enneagram personality typologies and healthy personality in Peruvian university students. A total of 261 male university students participated in this research, who responded to two instruments assessing the Enneagram personality types and a measure of healthy personality to psychosocial stress. A regularized cross-sectional network structure was estimated based on the Gaussian graph of partial correlations. The expected influence centrality, predictability and node bridging strength indices, as well as their stability and tests of differences, were also examined. It was found that Enneagram type 4 presented greater associations in the network structure with types 2 and 5. Type 6 emerged as the node with the greatest predictability. Healthy personality and type 7 acted as bridging variables between the personality domains, being causal activation links of the associative patterns of the psychodynamic styles and states according to the theorization of the Enneagram system. The accuracy of the network was adequate and its strength stability was adequate ($CS = .52$). It can be concluded that suggesting type 6, 7 with healthy personality to psychosocial stress, play an important role in the development of causal activation of the network model, where type 6 is more influential in direct and indirect relationships in the network. Consequently, it is relevant for future research to consider the typological knowledge of the Enneagram for implementation in university programs and to evaluate the psychological correlates of greater impact on mental health.

Introduction

The conception of humanism that the Western world inherited from the European Renaissance was that of *humanitas*, understood as the free and creative action of the human being who, by transforming nature and creating the world of culture, achieves transformation in the subject. A subject with potentials, beyond the health condition, is a person whose maximum expression is integrated into his personality (Gergen, 2015; Tudor, 2017).

Personality can be assumed by multiple theoretical proposals, most of these linked to diagnostic manuals in the field of mental health, which have promoted the development of personality tests as the Big Five system. However, other personality models require greater disclosure such as the Enneagram, which represents the psychological structure of the person from nine-character orientations (types) that integrate unique behaviors, dispositions, and traits according to an underlying motivation rooted in the ego's responses to a central fear or desire (Bland, 2010; Matise, 2007; 2019).

Chilean psychiatrist Claudio Naranjo worked alongside Fritz Perls, the founder of Gestalt therapy in his hometown of Berkeley, California, and teamed up with Hameed Ali of the University of California to introduce the work of the Enneagram into the academic and scientific context during the 1970s (Riso & Hudson, 2003). The theorization of the Enneagram refers that each type of personality has positive and negative aspects. Likewise, there are characteristics of development and collapse of typologies according to stressful and comfortable events (Sayre-Adams, 2003). Those with the same personality type can exhibit the characteristics of the previous or next personality type, called the *ala* type (Matise, 2019; Kam, 2019).

Within each type, there are fluctuating movements that can range from states of the high degree of psychological development and spiritual awareness to potentially pathological states of emotional distress,

whereas the individual progresses in the direction of development, he promotes his psychological growth and matures personally, while the individual who advances in the opposite direction tends to greater psychological vulnerability and the development of disorders of the personality (Matise, 2019; Kam, 2019). The concept of integration of the Enneagram refers that the enneatype of greater predominance has a point of high performance when it achieves the satisfaction of its central desire because it is more rooted in the positive features of its typology of development favorable to a better state of mental health. This is similar to the process of achieving the potential for growth and well-being after the satisfaction of basic psychological needs according to the theory of self-determination (Vansteenkiste & Ryan, 2013). In this context, the most important characteristic that distinguishes the Enneagram from other personality typologies is its psychodynamic character (Alexander & Schnipke, 2020; Riso and Hudson, 2003; Sayre-Adams, 2003).

There are three different classifications that group the personality traits of the Enneagram. First, there are the three basic centers of the human psyche: feeling (2, 3, and 4), thought (5, 6, and 7), and instinct (1, 8, and 9) (Riso & Hudson, 2003; Yao, 2021). Concerning the harmonic groups, they are grouped according to the coping styles and the reaction of the person to a disappointment, frustration, or when they do not get what they wanted (Riso & Hudson, 2003), consisting of the positive group (2, 7 and 9), competence (1, 3 and 5) and reactive (6, 4 and 8). While the Hornebian groups are based on the interpersonal tendencies of the personality according to Karen Horney, which allows explaining the characteristics of relationships and the search for needs and desires, also known as social styles, which are: the combative style (3, 7 and 8), reserved (4, 5 and 9) and obedient (1, 2 and 6) (Newtman, 2013; Roh et al., 2019).

The Enneagram could also be useful in cognitive and behavioral approaches. For example, Cognitive-Behavioral Therapy (CBT) (Beck, 2011) directs individuals to explore their perspectives and schemas, including cognitive distortions, which may be connected to unreliable feelings and behaviors. Psychological research has found connections between enneagram types and cognitive schemas (Wagner, 2008), as greater typological knowledge helps the individual understand their cognitive tendencies and possible distortions. In the Acceptance and Commitment Therapy of Hayes et al. (2011), one of the key objectives is to reduce rigidity and improve psychological flexibility. In this psychotherapeutic model, the Enneagram system allows the subject to increase awareness of situations that involve an inflexible way of relating to others, according to the personal characteristics of their type. This is considered a starting point to establish a more effective intervention in decreasing rigid responses and increasing psychological flexibility. In addition, the Enneagram in therapy has been used to map the client's temperament and personality, to plan an appropriate and efficient therapy process, to distinguish between congenital and temporary situations caused by a stressful event, and to determine the most effective therapy style (Daniels et al., 2018; Hook et al., 2021; Kam, 2018; Kam and Fluit, 2021; Popejoy et al., 2017).

Since the Personality Model of the Enneagram provides the most accurate guidance on the characteristics, motivations, behaviors, and personal styles of the individual, it has been used in many areas for personal, family, work, and academic development in various cultural-religious contexts of Asia (Engelseth et al., 2021; Lee & Kim, 2016; Lim & Park, 2021; Rasta et al., 2012); Europe (Luckcock, 2007; Sutton et al., 2013; 2015; Tapp & Engebretson, 2010). Africa (Ndirangu et al., 2019; Nettmann, 2013), South and North America (Coker & Mihai, 2017; Da Silva et al., 2021; Dell'Isola et al., 2021; Huffman et al., 2021; Linarez-Placencia et al., 2019; Northern, 2021).

Other previous studies emphasize the development of instruments for the typification of personality using the Enneagram system (Bland, 2010; Daniels et al., 2018) since during the last two decades there was greater diffusion of instrumental models of the Enneagram in the United States (Hook et al., 2021), however, more recently psychometric measures of this personality system have been developed in South America (Auccatoma & Luciano, 2020; Nuñez et al., 2021; Pineda et al., 2021).

On the other hand, it is important to evaluate the functioning of Enneagram enneatypes in specific groups such as male university students, given that research in other socio-cultural contexts such as Nigeria and Turkey has reported higher levels of some enneatypes compared to others (Rakhmanov et al., 2020; Yüksel & Kızılgöç, 2021).

In the university context, existing research on the Enneagram demonstrates its usefulness for self-knowledge (Kim & Chung, 2015; Shim & Lee, 2020) and mindfulness to the present moment that helps adults maintain healthy relationships (Lim & Park, 2021; Wang et al., 2019) and guides to empathically understanding the perspective of others, resulting in greater connection, strengthening the recovery process, and fostering compassion for others (Bayne et al., 2021; Roh et al., 2019).

On the other hand, it is important to study interpersonal reactions concerning stress since they have an important role in the personality and performance of coping strategies. Grossarth-Maticek & Eysenck (1990) reported six types of reaction to psychosocial stress, of which the only one of them is identified as a healthy personality based on emotional autonomy (type 4), which exhibits characteristic traits of type B personality (Johnsen et al., 1998; Shaw & Dimsdale, 2010) and a greater degree of self-regulation (Kirk & Martin, 1998). This personality is healthier due to positive and socially desirable reactions such as tolerance, extreme patience, and stoic

acceptance of problems, which refer to better control of behavior and emotions in social interactions. Previous studies show that there is a higher prevalence of this personality domain in university students, who present a better quality in interpersonal relationships and optimal academic performance (Condori, 2013; Hisam et al., 2014; Lee & Kim, 2021).

Since stress is the initiator of physiological and psychological dynamics in the path of self-knowledge according to the Enneagram and confidence an activator of emotions that together with consciousness motivate the patterns of behavior and attitudes people in social situations, it is important to evaluate globally the relationships between several typologies that activate states of integration and personality styles according to the dynamic functioning of the Enneagram associated with better health. Therefore, it was taken into account to evaluate the associative patterns of the enneatypes of the personality of the Enneagram and the healthy type to psychosocial stress, and to report the indices of centrality that determine the most influential typologies in a sample of Peruvian university students.

METHOD

Participants

The study sample was made up of Peruvian male university students from two universities in the city of Metropolitan Lima, who were selected by non-probabilistic sampling, for convenience. To participate in the study, students had to meet the following inclusion criteria: a) be over 18 years of age, b) be enrolled in university during the 2019-II cycle, and c) have accepted informed consent. Students who did not meet the inclusion criteria did not participate in the research. In this sense, the final sample was composed of 261 men, aged between 18 and 37 years ($M_{age} = 22$; $SD = 3.91$). The highest percentage of students belonged to the professional career of environmental engineering (59%) and psychology (24.1%), followed by nursing (12.6%) and obstetrics (4.2%).

Instruments

Personality according to the Enneagram

We used the Enneagram questionnaire of Pangrazzi (1997) composed of 9 enneatypes with the dichotomous response (0 = No and 1 = Yes). The enneatypes were composed of 20 reagents each, which were type 1- Perfectionist (items 1 to 20, for example, "I have an instinctive tendency to evaluate situations"), type 2- Helper (items 21 to 40, for example, "Many people depend on my help and my generosity"), type 3- Compliant (items 41 to 60, for example, "I have a very high energy level"), type 4- Romantic (items 61 to 80, for example, I appreciate the beauty of life more than most people), type 5- Observer (items 81 to 100, for example, "I usually choose my feelings"), type 6- Loyal (items 100 to 120, for example, "I am fundamentally a fairly balanced person"), type 7- Adventurous (items 121 to 140, for example, I am the type of person who likes to try everything a little in life), type 8- Challenger (items 141 to 160, for example, I feel able to take a stand and fight for what I believe in), type 9- Pacifist (items 161 to 180, for example, By nature, I am calm, calm and conciliatory). The Kuder-Richardson coefficients 20 among the enneatypes were between 0.80 to 0.82. that show adequate values of internal consistency.

Healthy personality to psychosocial stress

The measure of type 4 personality (healthy personality) of the Short Interpersonal Reactions Inventory (SIRI) instrument of Grossarth-Maticek & Eysenck (1990) was considered. It consists of 10 reagents (items 4, 11, 18, 25, 32, 39, 46, 53, 60, 67) with dichotomous response (0 = No and 1 = Yes). This measure of personality reported internal consistency of 0.68 according to the Kuder-Richardson coefficient 20. The Spanish version of Martínez-Correa & Reyes (2007) was used, which has adequate psychometric properties.

Procedures

Initially, a request for permission was made addressed to the directors of each university institution informing the purpose of the research and the academic purposes. After the acceptance of the request, the secretaries of each faculty provided the schedules, classroom numbers, and telephone contact of the tutor teachers to establish coordination. In this sense, with the support of university professors and tutors, the collection of information was carried out during the last three months of 2019, in the academic period of cycle II.

During the application, each student was explained the purpose of the ongoing research, the appropriate ways to respond to self-reports, the academic purposes of the information collected, the confidentiality of their responses, and anonymity. The self-reports were given to each student who decided to participate voluntarily and signed the informed consent. It is appropriate to mention that the participants did not receive financial remuneration when answering the survey, in which they took to deliver their answers in an average time of 30 minutes. The procedures used for the development of this research are under the requirements of the Declaration of Helsinki of 1964 and article number 27 of the code of professional ethics of the College of Psychologists of Peru.

Statistical analysis

The Gaussian graphical model (GGM) is a regularized partial correlation network to model the interaction between different variables or psychological constructions. In this graph, each variable is represented as circles, called "nodes" (or "vertexes"). The nodes are connected by lines, called "edges". Edges in GGM can be

understood as conditional dependency relationships between elements: if two nodes are connected in the network structure, they are dependent after adjusting all other nodes (Epskamp et al., 2012). If there is no advantage between two nodes, they are conditionally independent. In the network approach, graphical LASSO (absolute minimum selection and contraction operator) is used to estimate the GGM and avoid spurious edges, which leads to a dispersed network that describes the data with parsimony (Epskamp & Fried, 2018). To visualize the network, the Fruchterman-Reingold algorithm was used, which determines the position of a node based on the sum of connections it has with other nodes (Fruchterman & Reingold, 1991).

In addition, we took into account estimating the accuracy of the edge weights, with an accuracy of 95% of the confidence intervals by Bootstrapping 1000 samples around each edge in the network. The Bootstrap method of 1000 samples was considered to reinforce the stability of the network results, the stability of the force was also estimated by calculating the correlation stability coefficient (CSC), where the value should not be less than .25 and preferably higher than .50 (Epskamp & Fried, 2018; McNally, 2021). Likewise, the measure of expected centrality of influence that each node has from the number of connections (Ramos-Vera & Serpa, 2021; 2022) and predictability is reported, this index provides evidence of the relevance of each node in the network model, calculating the explained variance (R^2), recommended for continuous variables (Epskamp et al., 2018; Haslbeck & Waldorp, 2018). To strengthen the results, the differences in the measure of centrality and weights of the edges were analyzed, using non-parametric bootstrapping tests based on 1000 samples.

Finally, to determine the bridge variables, the strength-bridge index in the network model was considered, which connects the typologies of the Enneagram with the healthy personality, a limit of selection of the bridge centrality with > .80 percentile was taken into account (Jones et al., 2019). Statistical analyses were performed in the free software Rstudio version 4.1.1 with the bootnet, mgm, qgraph, psych, and network tools packages (Epskamp et al., 2018; Haslbeck & Waldorp, 2020; Jones, 2017; Revelle, 2018).

Results

Table 1 shows the descriptive statistics of the responses from the participants to the measures used. The mean score was between 6.18 (HP) and 13.68 (T1), while the highest standard deviation is in type 2 and the lowest in PS. The average predictability was 33.2%, with type 6 (46%) with the highest predictability, followed by type 8 (40.6%), type 5 (39.8%), and type 4 (39.4%). The entire network structure presented positive correlations, with type 4 with type 2 (.29) and type 5 (.22) being the largest network associations. Correlations are also evident between PS with type 7 (.17), type 6 (.16) and type 8 (.02). All this can be visualized in the regularized partial correlation matrix presented in Table 1. Likewise, the network graph shows the thickness of the connection by the magnitude of the correlation and the shaded proportion of the rings which represent the degree of variance of predictability between the nodes of the network (Figure 1).

Table 1. Descriptive analysis, predictability, and regularized partial correlation matrix

	<i>M</i>	<i>SD</i>	<i>P</i>	<i>T1</i>	<i>T2</i>	<i>T3</i>	<i>T4</i>	<i>T5</i>	<i>T6</i>	<i>T7</i>	<i>T8</i>	<i>T9</i>	<i>HP</i>
<i>T1</i>	13.68	3.63	18.3%	-									
<i>T2</i>	12.07	3.78	34.3%	.000	-								
<i>T3</i>	13.27	3.55	31.4%	.198	.122	-							
<i>T4</i>	11.86	3.73	39.4%	.141	.285	.000	-						
<i>T5</i>	12.40	3.75	39.8%	.000	.048	.107	.223	-					
<i>T6</i>	13.13	3.32	46.0%	.091	.110	.000	.137	.127	-				
<i>T7</i>	13.43	3.29	32.2%	.035	.004	.031	.026	.055	.141	-			
<i>T8</i>	13.32	3.23	40.6%	.038	.013	.181	.043	.162	.139	.199	-		
<i>T9</i>	13.04	3.34	33.4%	.051	.110	.086	.000	.164	.135	.093	.117	-	
<i>HP</i>	6.18	2.15	16.3%	.000	.000	.000	.000	.000	.155	.185	.017	.000	-

Note. *M*: Mean; *SD*: standard deviation; *P*: predictability; *T1*: type 1; *T2*: type 2; *T3*: type 3; *T4*: type 4; *T5*: type 5; *T6*: type 6; *T7*: type 7; *T8*: type 8; *T9*: type 9; *HP*: healthy personality

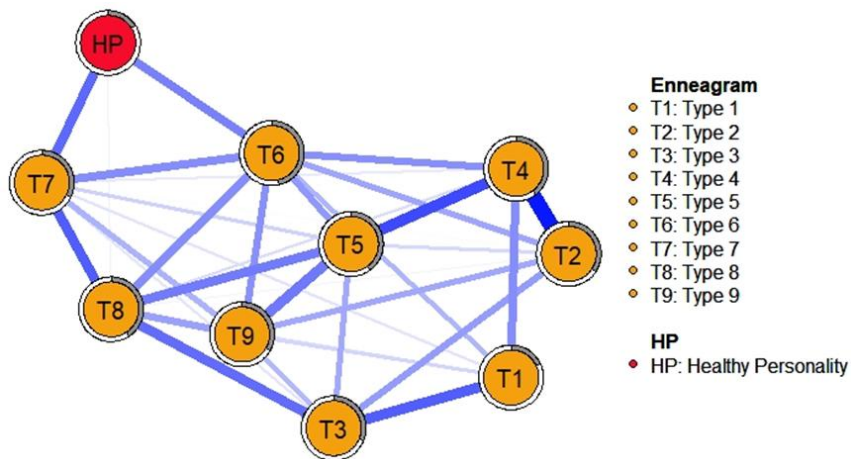


Figure 1. Network analysis of the nine personality types of the Enneagram and the healthy personality to psychosocial stress.

Figure 2 refers to the measures of expected influence centrality where a greater force of type 6 is highlighted. Other measures of greater centrality were types 8, 5, and 4.

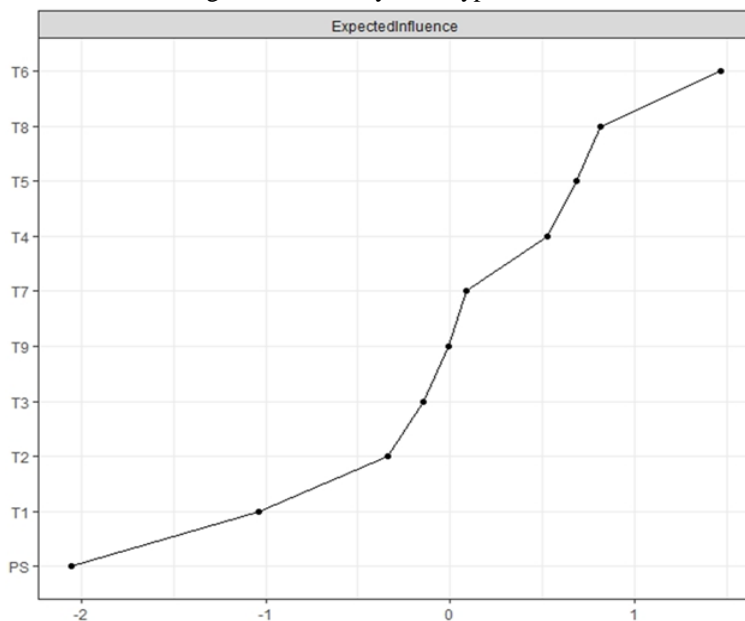


Figure 2. Network analysis expected-influence centrality indexes of network analysis

Figure 3 refers to the measures of bridge force centrality where it is shown that the healthy personality plays an important role in the development of the causal activation of the typologies of the Enneagram with the healthy personality.

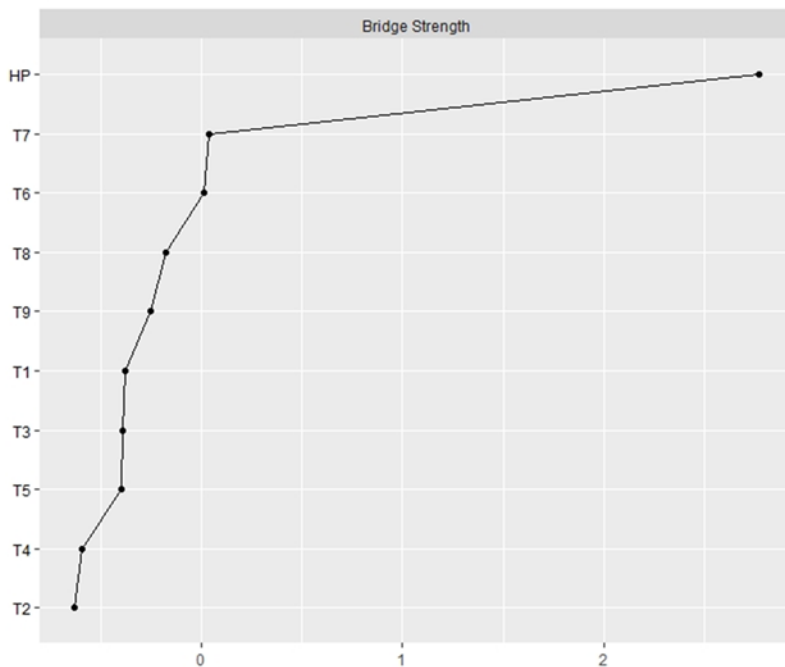


Figure 3. Network analysis bridge strength centrality indices

The accuracy of the edge weights is shown in Figure 4, where the red line indicates the weight of the sample edge (increasingly ordered) and the gray bars are the 95% CIs based on the Bootstrapping method. It is evident that most of the estimated edges were greater than zero and in general, they did not overlap with other edges, reflecting an accurate estimate.

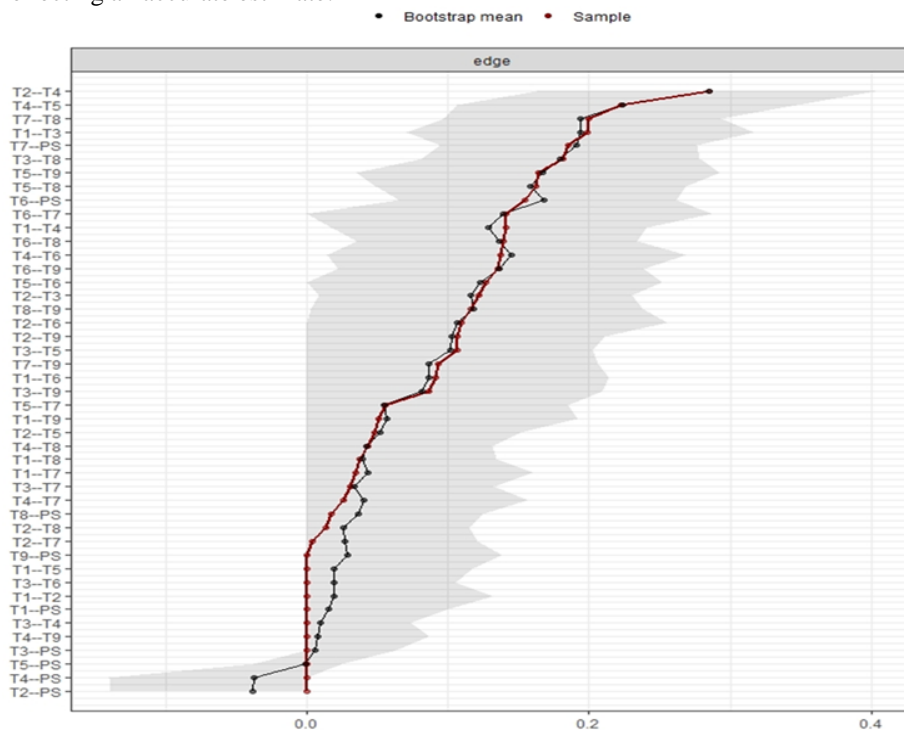


Figure 4. Accuracy of edge weights estimation and 95% Bootstrapping CIs

The stability of the force centrality index is presented in Figure 5, where the red line is the correlation between the strength index estimate and the subsamples to be used of the total sample. In that sense, it is observed that the force estimate is maintained even after removing large proportions from the sample and the CS coefficient demonstrated a value of .52, which indicates adequate stability of the strength of the nodes.

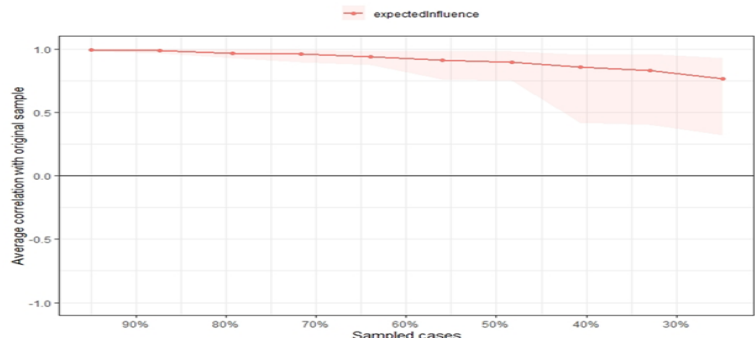


Figure 5. Stability of the force centrality index.

The Bootstrap difference test for node strength is presented in Figure 6 (graph on the right), where gray boxes indicate non-significant differences and black boxes indicate significant differences. Therefore, the measure of healthy personality to psychosocial stress was significantly different from all other centrality values except for type 1, while type 6 was significantly different from most Enneagram typologies in the network.

While the Bootstrap proof of difference for edge weights is presented on the left side of graph 6, where the fact that the Bootstrap interval of 95% of the differences between two edges includes the value zero (dark squares) or not (gray squares) indicates whether two edges are different from each other. The diagonal displays the magnitude of the original border, where the blue boxes are positive values and the red boxes negative edges and the color saturation indicates absolute values (the more saturated the color, the stronger the border). In that sense, the edge weights between type 4 and type 2 nodes are significantly different from most edges of the network.

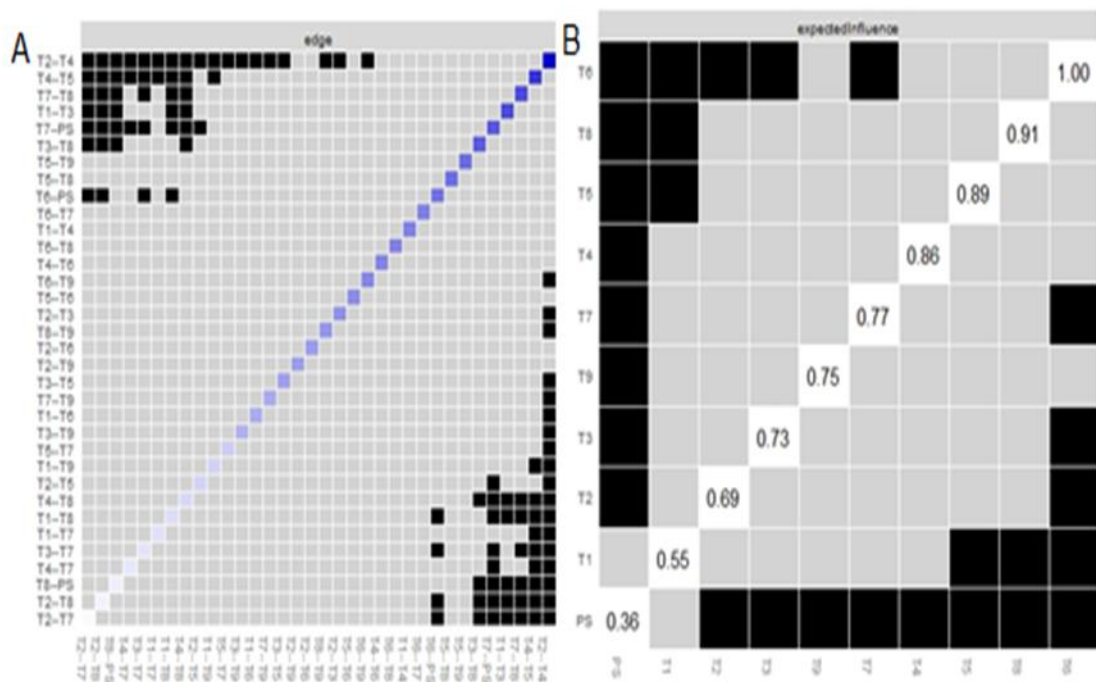


Figure 6. Bootstrap proof of difference for the expected centrality of influence of the nodes and weight of the edges

Discussion

Practical teaching and learning of the typological knowledge of the enneagram in mental health are important (Alexander & Schnipke, 2020) because during the last decade many research and psychological interventions that use this approach have shown that the recognition of personality according to the Enneagram favors the reduction of anxiety and improves self-esteem (Kang, 2015; Kim et al., 2019; Rasta et al., 2012; Seo et al., 2017).

A better understanding of the mechanism involved in personality according to the Enneagram model guides people to change dysfunctional defensive styles and psychological states of typological imbalance in interaction with the external world that allow university students a better adaptive coping in the face of future stressful events of greater internal conflict (Alexander & Schnipke, 2020; Kam, 2019).

It is possible to apply health promotion programs based on the Enneagram system in university students to develop their interpersonal skills (Lim& Park, 2021; Weafer, 2021) that favor personal development and

psychosocial maturity (Kam & Bellehumeur, 2021), essential in the improvement of academic competencies (Karabulut et al., 2021; Lee & Jeon, 2015).

It is possible that such programs can identify those students at higher risk of psychological vulnerability according to their typology (Lim & Park, 2021; Huffman et al., 2021), who require a better understanding of their personality limitations that can be counteracted by the potentiation of predominant skills of their kind. Therefore, this personality system allows university student to examine their strengths and weaknesses for better academic and professional development (Childs-Kean et al., 2020; Lee & Shim, 2016).

Enneatype 6 is the most influential measure (higher value of expected influence centrality and predictability) in the other typologies and styles of the Enneagram in the network that promote the traits of commitment, pro-social behavior, emotional intelligence, creativity, and leadership (Desmarais et al., 2020; Park et al., 2017; Weafer, 2021). A study in university students in South Korea specifies that the main strengths of those characterized by typology 6 are a high degree of responsibility and planning (Lee & Shim, 2016), therefore, they are more likely to have a profile of classroom coordinators, leaders of academic groups and are the most qualified to delegate university group work.

Moreover, according to the network of associative patterns of enneatypes of the Enneagram, it is possible to point to a trend in the direction of integration of type 6 with type 9 (better state of health), where type 6 individuals achieve greater psychological growth when they find greater control, satisfaction, and self-awareness of their desire for security and confidence. This gives them a better state of inner orientation, harmony, and courage to face distressing situations with a greater degree of resilience (Lee & Jeon, 2015; Kam, 2019), given the evidence of the causal relationship between both measures. People who reach a higher psychological development according to the Enneagram model tend to a better state of psychological flow oriented to an optimal experience favorable to academic performance in college students. In addition, it reinforces a high degree of work commitment and motivation to carry out sophisticated projects, such characteristics are part of their psychological growth as a result of the satisfaction of their typological needs (Matise, 2019; Panja, 2018).

Type 6 has a greater association with type 7 (located closer to the healthy personality in the network), which reinforces a personality with traits of optimism, patience, extroversion, and social support. According to Daniels & Price (2009), types 7 consider essential in their personal growth the effort to understand the feelings and thoughts of others. Optimism is the main character type 7 that favors mindfulness and reduces levels of depression, anxiety and stress, such a measure is recognized as a protective factor for mental health in the face of the current pandemic (Vos et al., 2021).

Previous research of the Enneagram points out that the university students with the greatest predominance of type 7 stand out for taking perspective (Roh et al., 2019), this cognitive attribute consists of the effort to adopt the point of view of another person and see things from their perspective (cognitive empathy; Hojat et al., 2002). Extroversion characteristics favor mental health, as they allow people to be more assertive, open to new social situations, and have a greater tendency to positive emotions (Anglim et al., 2020). After a brief review of the Enneagram investigations, 10 studies were found that specify significant relationships with the Measures of the Big Five, between the extroversion and openness domains with type 7 (Hook et al., 2021; Raimond, 2019). Likewise, a systematic study of the Enneagram indicated that having a dominant profile of type 7 is associated with a high tendency to extroversion according to the Myers-Briggs Typological Inventory in six of seven studies reviewed (Hook et al., 2021).

The healthy personality to psychosocial stress is the nexus (bridge variable) in the relational dynamics of the other typologies and styles of the Enneagram that reinforce a better state of health considering the intermediation of types 6 and 7. Another finding of interest is the higher relationship in the network of types 2 and 4, which refer to another integration dynamic according to the Enneagram. Types 2 can achieve a high degree of psychological growth given their higher prevalence with the positive characteristics of type 4, where empathy, cooperation, honesty, and self-acceptance of positive and negative emotions stand out (Riso and Hudson, 2003). Therefore, university students may tend to develop characteristics focused on feelings that allow them to improve communication and interpersonal skills in an empathetic and assertive way (Seo et al., 2017; Weafer, 2021).

The network results refer to causal associations between the typology of healthy personality to psychosocial stress with enneatypes 6 (loyal), 7 (adventurous), 8 (challenging), which activate the ways of connection of the psychological states of the Enneagram and reinforce the balance of the interactive functioning of such typological styles favoring greater self-control of emotions, actions, and thoughts (Matise, 2019). The styles of the Enneagram that presented causal associative patterns among their enneatypes were the styles: intellectual (types 5, 6, and 7), instinctive (types 1, 8 and 9), reactive coping (type 4, 6, and 8), and combative social (3, 7 and 8).

The causal associations of Enneagram types with healthy personality are added to other studies that show correlations with other constructs linked to psychological well-being (Koch, 2018; Pineda et al., 2021; Shin & Lee, 2016; Wang et al., 2019). While other findings demonstrate which typologies refer to a greater negative

impact on mental health (Araghi et al., 2015; Hur & Lee, 2011; Ibrahm, 2021; Karabulut et al., 2021; Shin & Lee, 2021; Sutton et al., 2013; Wagner, 2008). However, such results include analyses that do not allow us to consider the psychodynamic complexity of the Enneagram to determine the most influential typologies and to consider the functioning of the styles and psychological states of this personality model in a systemic way.

It is important to evaluate other network systems of the enneatypes of the Enneagram and their relationship with other measures associated with mental health and personality in other cultural-religious contexts.

Conclusion

To conclude, the present research refers to the greater importance of the expected influence of type 6 (more causal connections) in the network. Likewise, type 7 with healthy personality are the bridge measures that refer to a path of dynamic activation directly and indirectly from the typologies of the Enneagram with the healthy personality to psychosocial stress. In this system, the associations between enneatypes 2 and 4 stand out, and the relationships of healthy personality to psychosocial stress with types 6 and 7, such measures are closer in the network. The application of the Bootstrapping method specifies that the relationships and indexes of centrality in the network are stable measures.

Recommendations

First, the study only targeted university students from one Peruvian city, ignoring the rest of the population from other socio-cultural contexts; future research should include groups from the Sierra and Selva regions. Secondly, the study is cross-sectional, since it is a study on the behavior of the participants at a given time. Therefore, a longitudinal study is recommended for future studies. Finally, the study of personality according to the Enneagram is important to disseminate new knowledge and utilities in different contexts given its greater diffusion in the United States and Peru. The results may be useful for future researchers who wish to dynamically evaluate quantitative variables related to health sciences, social sciences, education and business sciences using personality network systems.

References

- Auccatoma Morales, R. J., & Luciano Ramirez, J. L. (2020). Adaptación del inventario de personalidad basado en eneagrama en estudiantes universitarios de Lima Metropolitana. (Thesis Bachelor). Universidad Cesar Vallejo. Lima. Perú. Retrieved from: https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/52820/Auccatoma_MRJ%20-%20Luciano_RJL-SD.pdf?sequence=1
- Alexander, M., & Schnipke, B. (2020). The Enneagram: A Primer for Psychiatry Residents. *American Journal of Psychiatry Residents' Journal*, 15(3), 2–5. <https://doi.org/10.1176/appi.ajp-rj.2020.150301>
- Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality: A meta-analysis. *Psychological Bulletin*, 146(4), 279-323. <https://doi.org/10.1037/bul0000226>
- Araghi, L., Jafari, A., & Fathi Aghdam, G. (2015). The Study of the Relation of Positive and Negative Emotions and Self-Control with Personality Types in Terms of Enneagram Model. *European Online Journal of Natural and Social Sciences: Proceedings*, 4(1), 2389-2398. Available from: https://europeanscience.com/eojnss_proc/article/view/4624
- Bayne, H. B., Fields, K. G., & Nesbit, L. (2021). The Enneagram as a Tool for Fostering Empathic Connection in Counseling. *The Journal of Humanistic Counseling*, 60(2), 80-100. <https://doi.org/10.1002/johc.12158>
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond*. (2nd ed). New York: USA. Guilford press.
- Bland, A. M. (2010). The Enneagram: A Review of the Empirical and Transformational Literature. *The Journal of Humanistic Counseling, Education and Development*, 49(1), 16–31. <https://doi.org/10.1002/j.2161-1939.2010.tb00084.x>
- Childs-Kean, L., Edwards, M., & Smith, M. D. (2020). A Systematic Review of Personality Framework Use in Health Sciences Education. *American Journal of Pharmaceutical Education*. 85(2),1-9. <https://doi.org/10.5688/ajpe7231>
- Coker, C., & Mihai, F. (2017). Personality traits and second language acquisition: The influence of the Enneagram on adult ESOL students. *TESOL Journal*, 8(2), 432-449. <https://doi.org/10.1002/tesj.281>
- Daniels, D., & Price, V. (2009). *The Essential Enneagram: The Definitive Personality Test and Self-Discovery Guide-Revised & Updated*. USA: Harper Collins.
- Daniels, D., Saracino, T., Fraley, M., Christian, J., & Pardo, S. (2018). Advancing Ego Development in Adulthood Through Study of the Enneagram System of Personality. *Journal of Adult Development*, 25(4), 229-241. <https://doi.org/10.1007/s10804-018-9289-x>
- Da Silva Vaz, S. H., Vasconcelos, H. G., Prado, L. F. R., da Silva, G. T. G., Rezende, L. C., Guedes, G. F. R. B., & da Silveira, D. G. (2021). Eneagrama de personalidades no processo de gestão de pessoas. *Brazilian Journal of Development*, 7(1), 1545-1565. <https://doi.org/10.34117/bjdv7n1-106>

- Dell'Isola, R., Durtschi, J., Topham, G., & Gimarc, C. (2021). A New Approach to Marriage Preparation: The Attachment-Differentiation Premarital Model. *Journal of Couple & Relationship Therapy*, 20(2), 149-173. <https://doi.org/10.1080/15332691.2020.1829522>
- Desmarais, M., Galiano, O., Gazemar, V., & Fréchette, J. (2020). The enneagram model for nursing competencies development-An exploratory qualitative study. *Journal of Nursing Education and Practice*, 10(8), 1-8. <https://doi.org/10.5430/jnep.v10n8p1>
- Engelseth, P., White, B. E., Mundal, I., Eines, T. F., & Kritchanchai, D. (2021). Systems modelling to support the complex nature of healthcare services. *Health and Technology*, 11(1), 193-209. <https://doi.org/10.1007/s12553-020-00504-8>
- Epskamp, S., Borsboom, D., & Fried, E. I. (2018). Estimating psychological networks and their accuracy: A tutorial paper. *Behavior Research Methods*, 50, 195-212. <https://doi.org/10.3758/s13428-017-0862-1>
- Epskamp, S., Cramer, A. O., Waldorp, L. J., Schmittmann, V. D. & Borsboom, D. (2012). qgraph: Network visualizations of relationships in psychometric data. *Journal of statistical software*, 48(1), 1-18. <https://doi.org/10.18637/jss.v048.i04>
- Epskamp, S., & Fried, E. (2018). A tutorial on regularized partial correlation networks. *Psychological Methods*, 23(4), 617-634. <https://doi.org/10.1037/met0000167>
- Fruchterman, T. y Reingold, E. (1991). Graph drawing by force-directed placement. *Software: practice and experience*, 21(11), 1129-1164. <https://doi.org/10.1002/spe.4380211102>
- Gergen, K. J. (2015). Toward a relational humanism. *The Journal of Humanistic Counseling*, 54(2), 149-165. <https://doi.org/10.1002/johc.12009>
- Grossarth-Maticek, R., & Eysenck, H.J. (1990). Personality, stress and disease: Description and validation of a new inventory. *Psychological Reports*, 66, 355-373. <https://doi.org/10.1176/appi.ajp.159.9.1563>
- Haslbeck, J. M., & Waldorp, L. J. (2018). How well do network models predict observations? On the importance of predictability in network models. *Behavior Research Methods*, 50, 853-861. <https://doi.org/10.3758/s13428-017-0910-x>
- Haslbeck, J. M., & Waldorp, J. (2020). mgm: Estimating Time-Varying Mixed Graphical Models in High-Dimensional Data. *Journal of Statistical Software*, 93(8), 1-46. <https://doi.org/10.18637/jss.v093.i08>
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). Acceptance and commitment therapy: The process and practice of mindful change. Guilford Press.
- Hevey, D. (2018). Network analysis: a brief overview and tutorial. *Health Psychology and Behavioral Medicine*, 6(1), 301-328. <https://doi.org/10.1080/21642850.2018.1521283>
- Hisam, A., Rahman, M. U., Mashhadi, S. F., & Raza, G. (2014). Type A and Type B personality among Undergraduate Medical Students: Need for psychosocial rehabilitation. *Pakistan Journal of Medical Sciences*, 30(6), 1304. <https://doi.org/10.12669/pjms.306.5541>
- Hojat, M., Gonnella, J. S., Nasca, T. J., Mangione, S., Vergare, M., & Magee, M. (2002). Physician empathy: definition, components, measurement, and relationship to gender and specialty. *American Journal of Psychiatry*, 159(9), 1563-1569. <https://doi.org/10.1176/appi.ajp.159.9.1563>
- Hook, J. N., Hall, T. W., Davis, D. E., Van Tongeren, D. R., & Conner, M. (2021). The Enneagram: A systematic review of the literature and directions for future research. *Journal of Clinical Psychology*, 77(4), 865-883. <https://doi.org/10.1002/jclp.23097>
- Huffman, L., Lefdahl-Davis, E. M., & Alayan, A. (2021). The Enneagram and the College Student: Empirical Insight, Legitimacy, and Practice. *Christian Higher Education*, 1-19. <https://doi.org/10.1080/15363759.2021.1929566>
- Hur, Y., & Lee, K. H. (2011). Analysis of medical students' enneagram personality types, stress, and developmental level. *Korean journal of medical education*, 23(3), 175-184. <https://doi.org/10.3946/kjme.2011.23.3.175>
- Ibrahim, A. (2021). Fear of (COVID-19) and its relationship to Enneagram patterns among a sample of Yemeni community members. *Research Square*. <https://doi.org/10.21203/rs.3.rs-865811/v1>
- Johnsen, K., Espnes, G. A., & Gillard, S. (1998). The associations between Type A\B behavioural dimension and Type 2\4 personality patterns. *Personality and individual differences*, 25(5), 937-945. [https://doi.org/10.1016/S0191-8869\(98\)00092-0](https://doi.org/10.1016/S0191-8869(98)00092-0)
- Jones, P. J. (2017). *Networktools: Assorted tools for identifying important nodes in networks. R package version 1.0.0*. <https://CRAN.R-project.org/package=networktools>
- Jones, P. J., Ma, R., & McNally, R. J. (2019). Bridge Centrality: A Network Approach to Understanding Comorbidity. *Multivariate Behavioral Research*, 56(2), 353-367. <https://doi.org/10.1080/00273171.2019.1614898>
- Kam, C. (2018). Integrating divine attachment theory and the Enneagram to help clients of abuse heal in their images of self, others, and God. *Pastoral Psychology*, 67(4), 341-356. <https://doi.org/10.1007/s11089-018-0817-1>

- Kam, C. (2019). Enneagram. In: Leeming D. (ed.) *Encyclopedia of Psychology and Religion*. Berlin: Springer. https://doi.org/10.1007/978-3-642-27771-9_200235-1
- Kam, C., & Fluit, D. V. (2021). Combining the enneagram and narrative therapy for adult ego development. *Current Psychology*, 1-10. <https://doi.org/10.1007/s12144-021-01421-3>
- Kang, M. J. (2015). Effects of enneagram program for self-esteem, interpersonal relationships, and GAF in psychiatric patients. *Journal of Korean Academy of Psychiatric and Mental Health Nursing*, 24(2), 116-126. <https://doi.org/10.12934/jkpmhn.2015.24.2.116>
- Karabulut, N., Yaman Aktaş, Y., Gürçayır, D., Bulut, G., Kara, A., & Yildiz, B. (2021). The effect of perceived stress and personality types of nursing college students on attitudes towards nursing profession during Covid-19 pandemic. *Vulnerable Children and Youth Studies*, 1-13. <https://doi.org/10.1080/17450128.2021.1954738>
- Kim, S. J., Jeong, I. J., & Kim, B. (2019). Effects of the Enneagram Group Counseling Program on Interpersonal Relationship, Self-esteem and Stress Coping Strategy in Nursing Students. *Journal of the Korea Convergence Society*, 10(10), 347-355. <https://doi.org/10.15207/JKCS.2019.10.10.347>
- Kim, W. G., & Chung, H. I. C. (2015). Effects of Korean enneagram program on the ego-identity, interpersonal relationship, and self-leadership of nursing college students. *Journal of Korean Academy of Nursing Administration*, 21(4), 393-404. <https://doi.org/10.11111/jkana.2015.21.4.393>
- Kirk, K. M., & Martin, N. G. (1998). The Short Interpersonal Reactions Inventory, Self-regulation and Differentiation scales in an older Australian twin sample. *Personality and Individual Differences*, 25(3), 591-604. [https://doi.org/10.1016/S0191-8869\(98\)00116-0](https://doi.org/10.1016/S0191-8869(98)00116-0)
- Koch, K.E. (2018). Examining the Effect of Enneagram Competence on Empathy in College Students. (Thesis Master). Baylor University. Texas. United States. Retrieved from: <https://baylor-ir.tdl.org/bitstream/handle/2104/10383/KOCH-THESIS-2018.pdf?sequence=1>
- Lee, G., & Kim, S. (2016). The Effects of an Enneagram Program on Codependency, Anger, and Interpersonal Relationship in Wives of Alcoholics. *Journal of Korean Academy of Psychiatric and Mental Health Nursing*, 25(3), 166-175. <https://doi.org/10.12934/jkpmhn.2016.25.3.166>
- Lee, J. K., & Kim, W. J. (2021). The Effects of Resilience and Personality Types on Major Satisfaction of Nursing Students. *Journal of the Korea Academia-Industrial cooperation Society*, 22(6), 100-107. <https://doi.org/10.5762/KAIS.2021.22.6.100>
- Lee, J.S., Yoon, J.A., & Do, K.J. (2013). Effectiveness of Enneagram Group Counseling for Self-identification and Depression in Nursing College Students. *Journal Korean Academic of Nursing*. 43(5), 649-657. <https://doi.org/10.4040/jkan.2013.43.5.649>
- Lee, M., & Jeon, H. (2015). Personal types, ego-resilience, and college adaptation in nursing and health care related students. *Journal of the Korea Academia-Industrial cooperation Society*, 16(12), 8861-8869. <https://doi.org/10.5762/KAIS.2015.16.12.8861>
- Lee, S. Y., & Shim, T. E. (2016). The Analysis of the Strength and the Weakness for College Students by Personality-Focusing on Enneagram Type 3-6-9. *Journal of the Korea Academia-Industrial Cooperation SOCIETY*, 17(10), 357-366. <https://doi.org/10.5762/KAIS.2016.17.10.35>
- Lim, H. J., & Park, K. (2021). The Effectiveness of a Spiritual Education for Spiritual Care Competence Reinforcement of Nursing Students. *Journal of Digital Convergence*, 19(1), 261-274. <https://doi.org/10.14400/JDC.2021.19.1.261>
- Linarez-Placencia, G., Espinoza-Castelo, L. M., & Pimentel-Félix, A. (2019). Neurociencia y eneagrama: Reconfigurando los equipos de trabajo. *Revista de Pedagogía*, 3(8), 6-16. Retrieved from: https://www.ecorfan.org/república/peru/research_journals/Revista_de_Pedagogia_Critica/vol3num8/Revista_de_Pedagog%C3%ADa_Critica_V3_N8.pdf#page=14
- Luckcock, T. (2007). Theoretical Resource: The soul of teaching and professional learning: an appreciative inquiry into the Enneagram of reflective practice. *Educational Action Research*, 15(1), 127-145. <https://doi.org/10.1080/09650790601151483>
- Martínez-Correa, A., & Reyes, G. A. (2007). Fiabilidad, validez factorial y datos normativos de la versión española del inventario abreviado de reacciones interpersonales (SIRI) de Grossarth-Maticek y Eysenck. *Revista de Psicopatología y Psicología Clínica*, 12(2), 131-142.
- Matise, M. (2007). The enneagram: An innovative approach. *Journal of Professional Counseling: Practice, Theory & Research*, 35(1), 38-58. <https://doi.org/10.1080/15566382.2007.12033832>
- Matise, M. (2019). The Enneagram: An Enhancement to Family Therapy. *Contemporary Family Therapy*. 41, 68-78. <https://doi.org/10.1007/s10591-018-9471-0>
- Ndirangu, S. K., Mutisya, S., & Gikonyo, J. (2019). Enneagram Personality Types (enneatypes) and Marital Satisfaction. *International Journal of Social Science and Economic Research*, 4(9), 6089-6111. <http://ijsser.org/more2019.php?id=468>
- Nettmann, R. W. (2013). Moving towards, against and away from people: the relationship between Karen Horney's interpersonal trends and the enneagram (Thesis Master). University of South Africa. Pretoria,

- South Africa. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.970.3898&rep=rep1&type=pdf>
- Northern. S.J. (2021). Examining the Effects of a Curriculum-Based Professional Learning Community on Teacher Efficacy Toward Inquiry-Based Science Instruction. (Thesis Doctoral). Western Kentucky University. Kentucky. United States. Retrieved from: <https://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1204&context=diss>
- Núñez, C., Ramos-Vera, C.A., Serpa, A., & Ogundokun, R.O. (2021). Adaptation of the Personality Type Inventory Based on Enneagram in Peruvian University Students of Health Sciences. *Journal of Research in Medical and Dental Science*, 9(5). <https://doi.org/10.13140/RG.2.2.33090.30404>
- Pangrazzi, A. (1997). El Enneagrama, un viaje hacia la libertad (2a ed.). Bilbao: SalTerrae-Santander.
- Panja, S. (2018). Designing the Conceptual Flow Model from Csikszentmihalyi to Gurdjieff: The Mystic Revelations. *Purushartha: A Journal of Management, Ethics and Spirituality*, 11(2), 25-39.
- Park, S.Y., Kim, W.K., & Choi, H.R. (2017). Clinical Career Preference, Nursing Professionalism & Creative Leadership according to Enneagram Personality Types in Nursing Students. *Learner-Centered Curriculum and Education Research*, 17(19), 733-750. <https://doi.org/10.22251/jlcci.2017.17.19.733>
- Pineda, W. F., Talepcio, J. D., & Rodríguez, C. L. A. (2021). Autoestima y eneatipos de personalidad del docente de primaria, en tiempos de COVID-19. *Revista Ciencia y Tecnología*, 17(2), 137-145. Retrieved from: <https://revistas.unitru.edu.pe/index.php/PGM/article/view/3571/4258>
- Popejoy, E. K., Perryman, K., & Suarez, A. (2017). Using the Enneagram to facilitate resolution of supervisory conflict. *Journal of Counselor Practice*, 8(2), 136-154. <https://doi.org/10.22229/htq402186>
- Raimond, A. (2019). Pouvoir prédictif de l'ennéagramme et du modèle de personnalité en cinq facteurs sur le profil de décision vocationnelle. (Tesis De Maestria). Université Catholique de Louvain, Bruselas, Bélgica. Retrieved from: https://dial.uclouvain.be/downloader/downloader.php?pid=thesis%3A22016&datastream=PDF_01
- Rakhmanov, O., Demir, A., & Dane, S. (2020). The Relationships Between Enneagram Personality Types and Conflict Problems in Male University Students Stayed in Dormitory. *Journal of Research in Medical and Dental Science*, 8(5), 28-32.
- Ramos-Vera, C. (2021). Statistical Relationship Networks in Psychiatric Research: The Case of Delirium in the Context of Covid-19. *Revista Colombiana de Psiquiatría(English ed.)*. <https://doi.org/10.1016/j.rcpeng.2021.02.001>
- Ramos-Vera, C., & Serpa, A. (2021). Network analysis in psychiatric research. *Actas Españolas de Psiquiatría*. 49(3), 123-124.
- Ramos-Vera, C. & Serpa A. (2022). El análisis de redes en la investigación clínica. *Revista Facultad de Medicina*, 70(1): e94407. <https://doi.org/10.15446/revfacmed.v70n1.94407>
- Rasta, M., Hosseinian, S., & Ahghar, G. (2012). A survey on the effectiveness of nine-type personality training (enneagram) on the mental health (anxiety and self-esteem) of school girls. *Journal of Basic and Applied Scientific Research*, 2(11), 11845–11849. <https://docplayer.net/53946983-A-survey-on-the-effectiveness-of-nine-type-personality-training-enneagram-on-the-mental-health-anxiety-and-self-esteem-of-school-girls.html>
- Revelle, W. (2018). *Psych: Procedures for Personality and Psychological Research*. Evanston: Northwestern University.
- Riso, D. R., & Hudson, R. (2003). *Discovering your personality type: The essential introduction to the Enneagram*. Houghton Mifflin Harcourt. NY: USA
- Roh, H., Park, K. H., Ko, H. J., Kim, D. K., Son, H. B., Shin, D. H., Lee, S. H., Jung, H. Y., & Heo, D. (2019). Understanding medical students' empathy based on Enneagram personality types. *Korean Journal of Medical Education*, 31(1), 73–82. <https://doi.org/10.3946/kjme.2019.120>
- Sayre-Adams, J. (2003). The Enneagram - a means to psychological and spiritual awareness. *Spirituality and Health International*, 4(4), 24–31. <https://doi.org/10.1002/shi.192>
- Schwarz, E., & Zarrabi, S. (2017). DAS²-Theory of Personality: A Cognitive Approach to the Enneagram. *Psychology*, 8(11), 1802-1815. <https://doi.org/10.4236/psych.2017.811118>
- Seo, Y-S., Choi, E-J., & Jeong, C-Y. (2017). The effect of the group counseling program on personal growth on the self-esteem, identity, and communication of university nursing students. *Korean Journal of Clinical Health Sciences*, 5(3), 925-935. <https://doi.org/10.15205/KSCHS.2017.09.30.925>
- Shaw, W. S., & Dimsdale, J. E. (2010). Type A Personality, Type B. In G. Fink (Ed.). *Stress consequences: Mental, neuropsychological and socioeconomic*, (pp. 72-76). CA, USA: Academic Press.
- Schwarz, E., & Zarrabi, S. (2017). DAS²-Theory of Personality: A Cognitive Approach to the Enneagram. *Psychology*, 8(11), 1802-1815. <https://doi.org/10.4236/psych.2017.811118>
- Shim J.E. & Lee. S. (2021). Care needs and death anxiety of palliative care ward nurses: focus on personality types. *Journal of the Korean Content Association*, 21(5), 737-745. <https://doi.org/10.5392/JKCA.2021.21.05.737>

- Shin, E. S., & Lee, S. (2016). The emotional intelligence, defense mechanism and interpersonal caring behavior by enneagram personality types in nursing students. *The Journal of Korean Academic Society of Nursing Education*, 22(4), 514-526. <https://doi.org/10.5977/jkasne.2016.22.4.514>
- Shin, E.S., & Lee, S. (2020). Effects of care promotion program based on nursing student's self-understanding: Application of enneagram group education. *The Journal of Korean Academic Society of Nursing Education*, 26(2), 132-145. <https://doi.org/10.5977/jkasne.2020.26.2.132>
- Sutton, A., Allinson, C., & Williams, H. (2013). Personality type and work-related outcomes: An exploratory application of the Enneagram model. *European Management Journal*, 31(3), 234-249. <https://doi.org/10.1016/j.emj.2012.12.004>
- Sutton, A., Williams, H. M., & Allinson, C. W. (2015). A longitudinal, mixed method evaluation of self-awareness training in the workplace. *European Journal of Training and Development*, 39(7), 610-627. <https://doi.org/10.1108/EJTD-04-2015-0031>
- Tudor, K. (2017). From humanism to Humanistic Psychology and back again. In R. House, D. Kalisch, & J. Maidman (Eds.) *Humanistic Psychology Current trends and future prospects* (pp. 222-236). Londres: Routledge. <https://doi.org/10.4324/9781315392943>
- Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23(3), 263-280. <https://doi.org/10.1037/a0032359>
- Vos, L. M., Habibović, M., Nyklíček, I., Smeets, T., & Mertens, G. (2021). Optimism, mindfulness, and resilience as potential protective factors for the mental health consequences of fear of the coronavirus. *Psychiatry Research*, 300, 113927. <https://doi.org/10.1016/j.psychres.2021.113927>
- Wagner, J. (2008). Enneagram styles and maladaptive schemas: A research inquiry. *The Enneagram Journal*, 1(1), 52-64. Retrieved from: <http://iranenneagram.ir/wp-content/uploads/2017/03/iranenneagram.c005.pdf>
- Wang, Y., Xu, F., & Qin, F. (2019). The Influence of Enneagram on Decision Style: Mindfulness as Mediator Variable. *Open Journal of Social Sciences*, 7(4), 266-281. <https://www.scirp.org/journal/paperinformation.aspx?paperid=91943>
- Weafer, D. (2021). Leadership, Emotional Intelligence, and the Enneagram: A Study of the Effects of Enneagram Training on College Student Leaders. (Bachelor Thesis). Western Kentucky University, Kentucky, United States. Retrieved from: https://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1950&context=stu_hon_theses
- Yao, Y. (2021). The geometry of three-way decision. *Applied Intelligence*, 1-28. <https://doi.org/10.1007/s10489-020-02142-z>
- Yüksel, A., & Kizilgeçit, M. (2021). Enneagram Kişilik Modeli Bağlamında İlahiyat Fakültesi Öğrencilerinin Kişilik Özelliklerinin Bazı Değişkenler Açısından İncelenmesi. *Turkish Journal for the Psychology of Religion*, 3, 9-38. Retrieved from: <https://dergipark.org.tr/en/download/article-file/1495653>

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