Dark Triad Personalities, Interpersonal Relationships and Workplace Behavior: A Brief Review of the Extant Literature

[1]Ohood Merair, [2]Tabassum Rashid

Abstract--Researchers have been increasingly interested in studying "dark traits" over the past few decades, particularly in relation to workplace behaviors and interpersonal relationship contexts. The Dark Triad (DT) is one spectrum of dark traits that has received unique attention among researchers. The Dark Triad (DT) is consisted of three deceptive characteristics, which are psychopathy, narcissism, and machiavellianism. The aim of this study was to briefly examine the relationship between Dark Triad and workplace behavior and interpersonal relationships in the existing literature. The selected literature on the impact of DT traits on the results of organizational and interpersonal relationships is presented. This work begins with an introduction on Dark Triad personalities where the definition of each personality was presented. Next, the review delves into the visibility of Dark Triads in workplace. Likewise, the review then covers connection between Dark Triads and general traits. Furthermore, this review has presented the existence of Dark Triads in relationship and the final section has discussed the characteristics of Dark Triads and organizational performances. The review concludes that Dark Triads is interpersonal and organizational related and distinguishing it is very important for better management.

Keywords--Dark Triad; personalities; narcissism; machiavellianism, psychopathy; organization

I. INTRODUCTION

Each person has different characteristics that distinguish him/ her from the others, and they all belong to the word personality. The term personality refers to how people think, act, and feel. Personality psychology is the study of human characteristics, including their feelings and behaviors [1]. It studies how people act in social interactions and how all characteristics meet to present themselves as one personality. People's personalities are divided into five main traits, neuroticism, extroversion, agreeability, conscientiousness, and openness to experience. These five personality traits are the main aspects of human beings and are easier to notice and figure out [2].

This review discusses personality's Dark Triad (DT), and the following sections will further delve into Dark Triad's personalities and its implication in practical life, relationships, and organizations.

[1]College of Humanities, Effat University, An Nazlah Al Yamaniyyah, Jeddah 22332, Saudi Arabia. E-mail: ohmarir@effatuniversity.edu.sa
[2]College of Humanities, Effat University, An Nazlah Al Yamaniyyah, Jeddah 22332, Saudi Arabia. E-mail: trashid@effatuniversity.edu.sa

II. PERSONALITIES OF DARK TRIAD

Dark Triad is comprised of three personalities. Figure 1 shows the Dark Triad personalities. It is comprised of narcissism, machiavelliansim and psychopathy [3].Narcissism refers to people who love themselves more than anyone else and love to get the attention all the time. Some of the characteristics of narcissistic people are selfish, critical, arrogant, and boastful [4]. Narcissism was researched using a range of theoretical designs. Individuals with greater rates of narcissism are probable to: (a)harbour sentiments of supremacy motivated by an exaggerated or grandiose feeling of ego, (b) have a dysfunctional need for unnecessary scrutiny and appreciation, (c) have a propensity to engage in exploitative deeds or attitudes, and (d) absence compassion, leaning towards callousness [5]. In addition, narcissism is often expressed as "interpersonally exploitative deeds, absence of compassion, severe jealousy, violence and sadism [6]. Machiavellianism is defined as faith in the use of technology as needed to attain one's intended ends in the framework of the job setting [7]. Machiavellianism refers to people who think they are better than others and who love to make fun of all the people around them [7]. Machiavellian people can be noticed in their lack of morality and emotion, duplicity, self-interest, and manipulation. Moreover, the key distinguishing characteristic of machiavellianism is a inclination towards abuse, often followed by (a) absence of empathy, (b) reduced concentrations of influence, (c) concentrate on achieving one's own objectives, often at the cost of others, and (d) an absurd sense of ethics [8]. The final, and probably most destructive, DT division is psychopathy. Psychopathy, refers to people who have aggressive tendencies towards the people around them, they are usually antisocial people [9].In addition, psychopathy is described in four main aspects: interpersonal abuse (e.g., grandiosity, cheating, subtle beauty); cruel effect (e.g., absence of empathy, absence of guilt); unpredictable behavior (e.g., impulsivity and lack of responsibility,); and criminal behaviors (e.g., introverted and destructive behavior) [10].
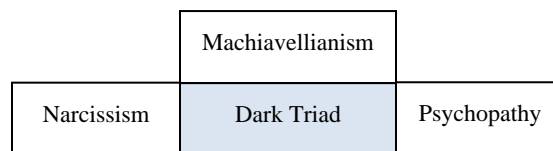
Figure 1: Dark Triad personalities

The fact that these three personality types are more difficult to deal with, there are some major common characteristics among the Dark Triad (DT) personalities. All three personalities are looking for their own needs and personal benefits. They prefer short-term relationships to long-term relationships. They are similar in ignoring social values, too. Only Narcissism is considered as a personality disorder according to Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) within all three personalities [11].

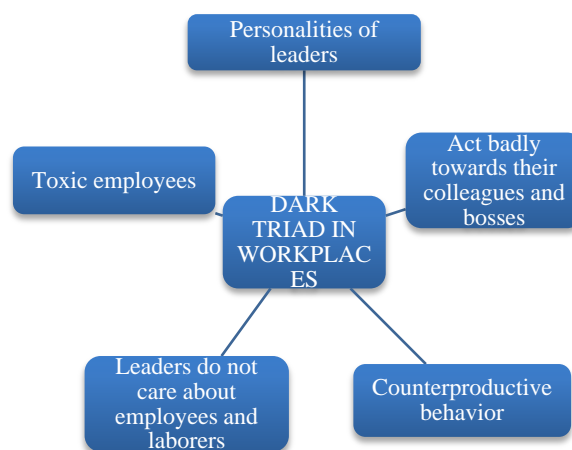## III. DARK TRIAD IN WORKPLACES

Mathieu et al. [12] discussed the Dark Triad personality and its impact on employees, especially how the personalities of leaders affect the career success and psychological well-being of employees. The study results show that the effected personality of the dark triad personality is narcissism. Furthermore, the results showed that the

employees who are led by machiavellianism or psychopathy leaders do not feel good in terms of job satisfaction and psychological well-being.

Another study by Templer[13] discussed about employees with Dark Triad personalities may be toxic in the workplace. It examined how Dark Triad employees can act badly towards their colleagues, bosses, and how they can damage the entire company. The study discussed how to use hard and soft tactics to get what they want from the others. It actually ended up finding that using hard tactics, psychopathy and machiavellianism also use soft tactics, machiavellianism and narcissism. The difference between hard and soft tactics is that they force the person to do what they want by pressing him / her directly to get quick needs done, and on the other type of tactics they do the same thing, but in a long time they don't get quick needs.

DeShong et al. work [14] examined the conduct at the workplace using the Dark Triad and the five-factor model. This research has evaluated the appropriate character model that can be used to portray the counterproductive behavior in the workplace. The research used path analysis to determine the suitable character that could portray the conduct in the workplace. The result of the work indicates that the most parsimonious framework is consistency and conscientiousness. Furthermore, the findings showed that counterproductive behavior in the workplace was linked to the character of machiavellianism and narcissism.

The problem here is that the heads of labor are not really taking care of what these employees are doing; they are actually focusing on their benefits. They only think about the final results that get the work done [15]. Therefore, Dark Triad employees and leaders are harmful and have a detrimental effect on the workplace. As for leaders, only narcissistic leaders can be more concerned about their employees just because they want to hear compliments from them [12]. And as for employees, they are all toxic in the workplace, they tend to use tactics to get their benefits and take what they need from their colleagues [15].Thus, based on the reviewed studies, the overall summary of the elements of Dark Triad in workplaces is illustrated in Figure 2.

Figure 2: Dark Triad in workplaces

IV. THE DARK TRIAD AND GENERAL TRAITS

Birkás et al. [16] looked at the different characteristics of the Dark Triad and predicted distinct coping preferences. There was a relationship among the Dark Triad between coping strategies and socially aversive personality traits. Birkás et al. [16] used two measurements to obtain the results. The results showed that in the first test, people of machiavellianism and psychopathy tend to have negative reactions to task-oriented situations, which means they take less effort to react and face stressful situations. On the other hand, people with narcissism showed positive reactions to task-oriented situations, making more effort to deal with stressful situations. The results of the second test showed that the people of narcissism are able to control their feelings and face their stressful situations. Furthermore, machiavellianism and psychopathy showed a negative connection in searching for social support situations [16].

Milleret al.[17] work showed two differences between Machiavellianism and Psychopathy. First, there is a positive and independent connection between Machiavellianism and positive re-evaluation. Second, in the confronted coping strategy, psychopathy showed a positive and unique predictor. Furthermore, unlike the other personalities, narcissism has a special way to cope with stress strategies, which means that narcissism is the winner in the coping competition [17].van Geel et al. [18] analyzed the differences and similarities in the Dark Triad of personality traits. They used the Big Five Personality as a basic competition to see if they had any similarities or differences between them. The Big Five traits are neuroticism, openness, extraversion, consciousness, and compatibility. The results of the study showed there are some similarities between the DT traits.

Furthermore, work done by O'Boyle et al. [19] found that the only common thing between DT and all the Big Five's is disagreeability. In addition, it was found that psychopaths have low neuroticism, machiavellianism, and psychopaths have low consciousness, and narcissism has not shown a noticeable relationship with any of the Big Five traits.
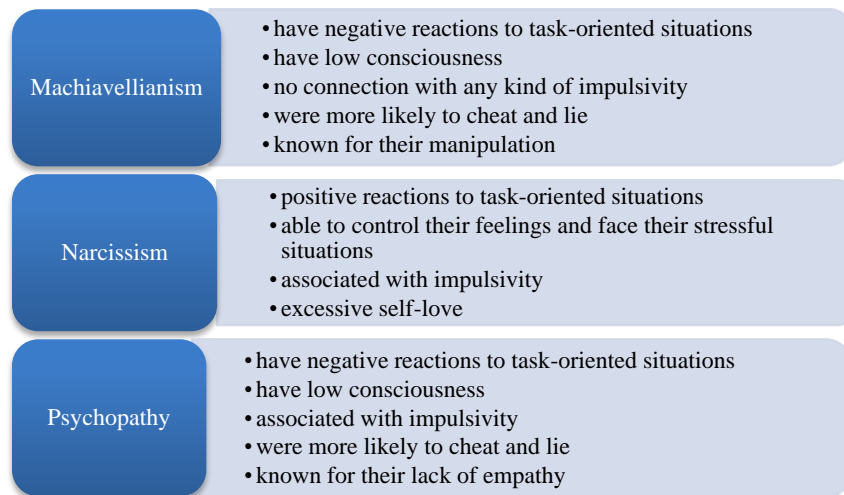
Moreover, impulsivity can explain the differences within the dark triad of personality. Malesza and Ostaszewski [20] discovered in their study that narcissism and psychopathy were generally associated with impulsivity. Narcissism was associated with functional impulsivity and psychopathy was associated with dysfunctional impulsivity. On the other hand, Machiavellianism had no connection with any kind of impulsivity [20].

In a study byRoeseret al.[21], the association of Dark Triad of personality and unethical behavior at different times of the day was analyzed. Researchers attempted to figure out if there were any variations in unethical behavior between day and night in the Dark Triad Personality. The outcome of the work showed that there were no changes in their unethical behaviors, regardless of the time. However, they found that machiavellianism and psychopathy were more likely to cheat and lie and it was not related to the time of the day.

Work of Jonason et al. [22] showed that the results of the correlation between Dark Triad and The Big Five were that those who scored high in narcissism were positively correlated with physically attractive mates in long-

term relationships. Furthermore, the results showed that those who scored high in psychopathy were negatively correlated with kind mates in long-term relationships, and those who scored high in machiavellianism were negatively correlated with creative mates.

Figure 3 shows the summary for each of the personalities under the Dark Triad. Based on Figure 3, as shown by the findings of the studies, the Dark Triad personalities are harmful personalities. They have different bad characteristics; they hide them from the others as much as they can, and they all have the same goal of harming people they are dealing with. Each of the Dark Triads has some main characteristics that distinguish them from each other. Machiavellians are known for their manipulation, psychopathy is known for their lack of empathy, and narcissists are known for their excessive self-love.

Machiavellianism
- have negative reactions to task-oriented situations
- have low consciousness
- no connection with any kind of impulsivity
- were more likely to cheat and lie
- known for their manipulation

Narcissism
- positive reactions to task-oriented situations
- able to control their feelings and face their stressful situations
- associated with impulsivity
- excessive self-love

Psychopathy
- have negative reactions to task-oriented situations
- have low consciousness
- associated with impulsivity
- were more likely to cheat and lie
- known for their lack of empathy

Figure 3: Summary of Dark Triad personalities in terms of traits

V. DARK TRIADS IN RELATIONSHIPS

According to Jonason and Kavanagh [23], there are 6 types of love that are agape, eros, ludus, pragma, mania and storge love. Agape love is an altruistic love, it's about people who tend to be selfless, patient, and giving other than themselves, it is like the normal love of parents to the children. Eros love is a romantic love, it's the kind of love that all normal people are looking for when they feel with their partners as if they are mates of the soul and complete each other, people with this kind of love seeking long-term relationships. Ludus love is a playful or infatuated love, in this type of love people enjoy spending time together and doing some activities together, but without any commitments, it's about a short-term relationship and it doesn't seem like a kind of love to some people. Pragma love is a practical love, in this type people don't have real feelings for their partners, like most of the arranged marriages they have a commitment, but without any romantic feelings, they just do their duties and take back their rights. Mania love is an obsessive love, people with this type of love usually feel over jealousy about their partner and try to control the behaviors of their partners, it is unhealthy love and leads to unhappy relationships. Storge love that is companion love, it's the kind of love between close friends, it's found in friendships that have commitments and support all the time, but without romantic feelings between them [23].

The work of Koladich and Atkinson[24] stated that men had high scores than women in the dark triad personality tests, and the dark triad connected with two love styles that are Ludus and Pragma. Narcissism associated with Pragma and Ludus, psychopathy associated only with Ludus, and machiavellianism was high in Mania love style, and also associated with all styles except Eros style.

In Alavi et al. work [25], it was found that there is a relationship between Dark Triad and the three types of jealousy among pairs of homosexuals and heterosexuals in a serious emotional relationship. The three types of jealousy are reactive, preventive, and anxious jealousy. Furthermore, the work of Lee et al. found that that none of the Dark Triad has any positive relationship with reactive jealousy, anxious jealousy was slightly connected with narcissism and machiavellianism, and preventive jealousy was connected to all the Dark Triad.

Likewise, Barelds et al. work [26] showed that there was no connection with jealousy between heterosexuality or homosexuality. Women scored high in reactive jealousy than men, and men scored high in psychopathy and machiavellianism than women. A study by Carter et al. [27] tested the possibility that males with high levels of Dark Triad personality could be more attractive to females. The final results showed that males with higher levels of Dark Triad personality are more attractive to females than others. It also showed that women tend to prefer these personalities in short-term relationships more than long-term relationships.

Furthermore, Qureshi et al. [28] attempted to find out whether there is any relationship between female age and their attractiveness to the Dark Triad personality from the other gender. The results showed that the older females in Dark Triad were less interested in mating high-scored males, and the younger females (minimum 18 years) were interested in mating males with Dark Triad personality.

Figure 4 shows the summary for each of the personalities the Dark Triad in terms of relationship. To sum up, the existing literature points out thatmen's scores are higher in Dark Triad than women, and Dark Triad people are more involved in two love styles that are Ludus and Pragma [24]. It also finds that all Dark Triads showed a positive connection with preventive jealousy, and only narcissism showed a very slight connection with anxious jealousy, women also scored higher in reactive jealousy than men, and there was no relationship between homosexuality and heterosexuality with any kind of jealousy [26]Ultimately, people with Dark Triad prefer short-term relationships, machiavellianism and psychopathy negatively correlated in long-term relationships with the kind and creative mates, and psychopathy positively correlated in long-term relationships with physically attractive mates [23].
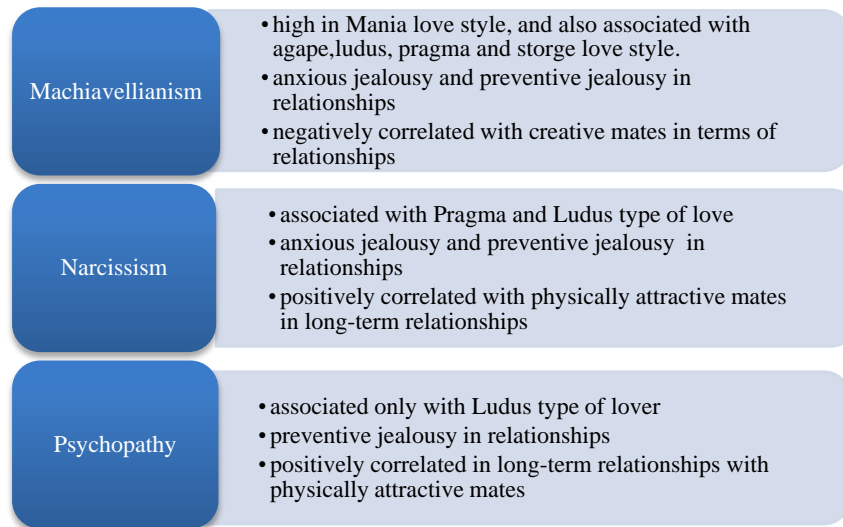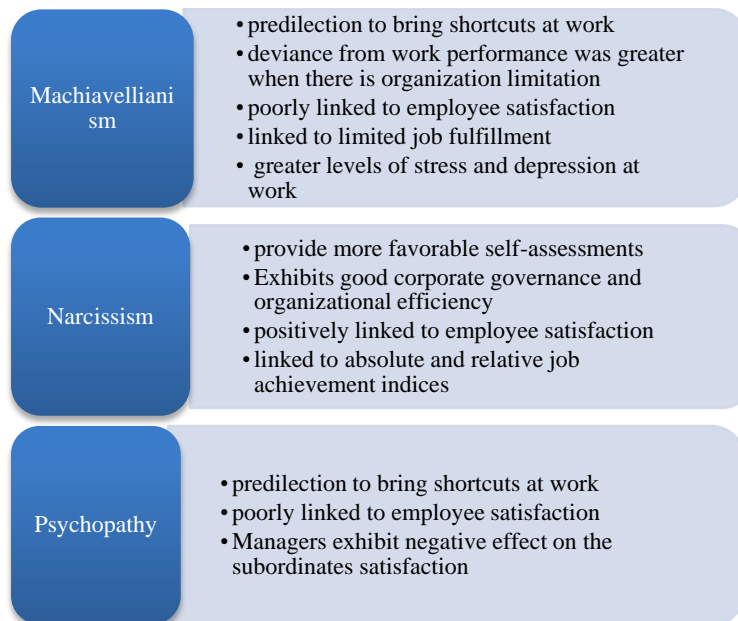
Figure 4: Summary of Dark Triad personalitiesin relationships

VI. DARK TRIADS AND ORGANIZATIONAL PERFORMANCE

Researchers are seeking to deeper comprehend the effect that the undesirable behaviors connected with DT personality characteristics would have on administrative, behavioral, and individual results within the organizational domains.

Guedes [29] found that the blended results for the nonparametric connection between narcissism and work performance might be partly attributable to the manner job performance is evaluated. Explicitly, narcissistic people preferred to provide more favorable self-assessments, contributing to a substantial favorable relativity when work performance was empirically self-assessed. Petrenko et al. [30] discovered a stronger connection between corporate governance and organizational efficiency in organisations with extremely narcissistic executives compared organisations with less narcissistic executives. In addition, Jonason and O'Connor [31] discovered that psychopathy and machiavellianism each exclusively responsible for variability in the predilection to bring shortcuts at job, even after monitoring for all of the Big Five characteristics. Castilleetal. [32]found that institutional limitation (i.e., absence of funds) shouted down the connection between machiavelliansimand self-reported perversion in work performances. Moreover, psychological weakening facilitated this impact. Likewise, when organisational limitations were strong and caused to social weakening (owing to commodity rivalry), the beneficial connection between machiavellianism and deviance from work performance was greater. Jonason et al. [33] used a batch of workers with a variety of positions to assess the immediate and implicit interactions between DT characteristics and employee satisfaction. They discovered that narcissism was strongly linked to employee satisfaction, but there has been proof it was an implicit impact conducted through expectations of job recognition and work liberty. Machiavellianism and psychopathy were poorly linked to employee satisfaction, however these impacts were also performed by presumed competitivity. Hirschi and Jaensch [34] discovered important implicit impacts of narcissism on job fulfillment through self-efficacy and professional commitment. The research has suggested that individual-specific views and intentions elevated in DT characteristics influence those employees ' behavior within the job setting. Volmer et al.

[35] found that the narcissism, machiavellianism, and psychopathy of managers epigenetically anticipated intrinsic and conditional results for subordinates. Specifically, the narcissism of managers was strongly linked to absolute and relative job achievement indices and had no adverse effect on the wellbeing of their underlings. Additionally, the machiavellianism of managers was linked to limited job fulfillment and greater levels of stress and depression. Likewise, the psychopathy of managers was also discovered to have a negative effect on the employee satisfaction of subordinates. Thus, based on the reviewed studies, Figure 5 shows the overall summary of the Dark Triad personalities in terms of organizational performance. Thus, it is deduced that, when it comes to organizational performance, each of the Dark Triad personalities has distinctive attributes when it comes to organizational performance.

Machiavellianism
- predilection to bring shortcuts at work
- deviance from work performance was greater when there is organization limitation
- poorly linked to employee satisfaction
- linked to limited job fulfillment
- greater levels of stress and depression at work

Narcissism
- provide more favorable self-assessments
- Exhibits good corporate governance and organizational efficiency
- positively linked to employee satisfaction
- linked to absolute and relative job achievement indices

Psychopathy
- predilection to bring shortcuts at work
- poorly linked to employee satisfaction
- Managers exhibit negative effect on the subordinates satisfaction

Figure 5: Summary of Dark Triad personalities in terms of organizational performance

VII. CONCLUSION

This work has provided a brief review of Dark Triad and serves as good information for individuals to further understand their personalities. People with Dark Triad personalities are more controlling in the workplace, seeking their own benefits and only meeting their needs, thus harming their colleagues and organizations in general. Distinguishing the different types of dark personalities is very important because there are different practical consequences both at the interpersonal and organizational level. The authors predict that DT characteristics will proceed to play a key position in future studies related to personality analysis.

REFERENCES

1. Paulhus, D. L., & Jones, D. N. (2015). Measures of dark personalities. In *Measures of personality and social psychological constructs* (pp. 562-594). Academic Press.
2. Freeberg, T. M. (2018). Populations and personalities. *Journal of Comparative Psychology*, *132*(4), 347.
3. Vize, C. E., Lynam, D. R., Collison, K. L., & Miller, J. D. (2018). Differences among dark triad components: A meta-analytic investigation. *Personality Disorders: Theory, Research, and Treatment*, *9*(2), 101.

4.   Krizan, Z., &Herlache, A. D. (2018). The narcissism spectrum model: A synthetic view of narcissistic personality. *Personality and Social Psychology Review*, *22*(1), 3-31.

5.   Hetal Patel, Mukesh Gohel (2016) A Review On Development Of Multifunctional Co-Processed Excipient. Journal of Critical Reviews, 3 (2), 48-54.

6.   Morey, L. C., Benson, K. T., &Skodol, A. E. (2016). Relating DSM-5 section III personality traits to section II personality disorder diagnoses. *Psychological Medicine*, *46*(3), 647-655.

7.   Brummelman, E., Thomaes, S., & Sedikides, C. (2016). Separating narcissism from self-esteem. *Current Directions in Psychological Science*, *25*(1), 8-13.

8.   Abell, L., Brewer, G., Qualter, P., & Austin, E. (2016). Machiavellianism, emotional manipulation, and friendship functions in women's friendships. *Personality and Individual Differences*, *88*, 108-113.

9.   Collison, K. L., Vize, C. E., Miller, J. D., &Lynam, D. R. (2018). Development and preliminary validation of a five factor model measure of Machiavellianism. *Psychological assessment*, *30*(10), 1401.

10. Schütte, N., Blickle, G., Frieder, R. E., Wihler, A., Schnitzler, F., Heupel, J., &Zettler, I. (2018). The role of interpersonal influence in counterbalancing psychopathic personality trait facets at work. *Journal of Management*, *44*(4), 1338-1368.

11. Nishi Gupta, Garima Vishnoi, Ankita Wal, Pranay Wal. "Medicinal Value of Euphorbia Tirucalli." Systematic Reviews in Pharmacy 4.1 (2013), 40-46. Print. doi:10.4103/0975-8453.135843

12. Hoff, H. A., Rypdal, K., Hart, S. D., Cooke, D. J., &Mykletun, A. (2015). Domains of psychopathy: Evaluating the structure of a lexical model of psychopathic personality disorder. *Personality Disorders: Theory, Research, and Treatment*, *6*(2), 117.

13. Armour, C., Müllerová, J., &Elhai, J. D. (2016). A systematic literature review of PTSD's latent structure in the Diagnostic and Statistical Manual of Mental Disorders: DSM-IV to DSM-5. *Clinical Psychology Review*, *44*, 60-74.

14. Mathieu, C., Neumann, C. S., Hare, R. D., &Babiak, P. (2014). A dark side of leadership: Corporate psychopathy and its influence on employee well-being and job satisfaction. *Personality and Individual Differences*, *59*, 83-88.

15. Templer, K. J. (2018). Dark personality, job performance ratings, and the role of political skill: An indication of why toxic people may get ahead at work. *Personality and Individual Differences*, *124*, 209-214.

16. DeShong, H. L., Grant, D. M., & Mullins-Sweatt, S. N. (2015). Comparing models of counterproductive workplace behaviors: The Five-Factor Model and the Dark Triad. *Personality and Individual Differences*, *74*, 55-60

17. Furtner, M. R., Maran, T., &Rauthmann, J. F. (2017). Dark leadership: The role of leaders' dark triad personality traits. In *Leader development deconstructed* (pp. 75-99). Springer, Cham.

18. Birkás, B., Gács, B., &Csathó, Á. (2016). Keep calm and don't worry: Different Dark Triad traits predict distinct coping preferences. *Personality and Individual Differences*, *88*, 134-138.

19. Miller, J. D., Hyatt, C. S., Maples-Keller, J. L., Carter, N. T., &Lynam, D. R. (2017). Psychopathy and Machiavellianism: A distinction without a difference?. *Journal of personality*, *85*(4), 439-453.

20. van Geel, M., Goemans, A., Toprak, F., &Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and Individual Differences*, *106*, 231-235.

21. O'Boyle, E. H., Forsyth, D. R., Banks, G. C., Story, P. A., & White, C. D. (2015). A meta- analytic test of redundancy and relative importance of the dark triad and five- factor model of personality. *Journal of personality*, *83*(6), 644-664.

22. Malesza, M., &Ostaszewski, P. (2016). Dark side of impulsivity—Associations between the Dark Triad, self-report and behavioral measures of impulsivity. *Personality and Individual Differences*, *88*, 197-201.

23. Roeser, K., McGregor, V. E., Stegmaier, S., Mathew, J., Kübler, A., &Meule, A. (2016). The Dark Triad of personality and unethical behavior at different times of day. *Personality and Individual Differences*, *88*, 73-77.

24. Jonason, P. K., Strosser, G. L., Kroll, C. H., Duineveld, J. J., &Baruffi, S. A. (2015). Valuing myself over others: The Dark Triad traits and moral and social values. *Personality and Individual Differences*, *81*, 102-106.

25. Dinesh kumar S, Veeramani R. "HARVESTING MICROWAVE SIGNAL POWER FROM THE AMBIENT ENVIRONMENT." International Journal of Communication and Computer Technologies 4 (2016), 76-81. doi:10.31838/ijccts/04.02.04

26. Jonason, P. K., & Kavanagh, P. (2010). The dark side of love: Love styles and the Dark Triad. *Personality and Individual Differences*, *49*(6), 606-610.

27.   Koladich, S. J., & Atkinson, B. E. (2016). The dark triad and relationship preferences: A replication and extension. *Personality and Individual Differences*, *94*, 253-255.

28.   Alavi, M., Mei, T. K., &Mehrinezhad, S. A. (2018). The dark triad of personality and infidelity intentions: the moderating role of relationship experience. *Personality and Individual Differences*, *128*, 49-54.

29.   Barelds, D. P., Dijkstra, P., Groothof, H. A., &Pastoor, C. D. (2017). The Dark Triad and three types of jealousy: Its' relations among heterosexuals and homosexuals involved in a romantic relationship. *Personality and Individual Differences*, *116*, 6-10.

30.   Carter, G. L., Campbell, A. C., Muncer, S., & Carter, K. A. (2015). A Mokken analysis of the Dark Triad 'Dirty Dozen': sex and age differences in scale structures, and issues with individual items. *Personality and Individual Differences*, *83*, 185-191.

31.   Qureshi, C., Harris, E., & Atkinson, B. E. (2016). Relationships between age of females and attraction to the Dark Triad personality. *Personality and Individual Differences*, *95*, 200-203.

32.   Guedes, M. J. C. (2017). Mirror, mirror on the wall, am I the greatest performer of all? Narcissism and self-reported and objective performance. *Personality and Individual Differences*, *108*, 182-185.

33.   Petrenko, O. V., Aime, F., Ridge, J., & Hill, A. (2016). Corporate social responsibility or CEO narcissism? CSR motivations and organizational performance. *Strategic Management Journal*, *37*(2), 262-279.

34.   Jonason, P. K., & O'Connor, P. J. (2017). Cutting corners at work: An individual differences perspective. *Personality and Individual Differences*, *107*, 146-153.

35.   Castille, C. M., Kuyumcu, D., & Bennett, R. J. (2017). Prevailing to the peers' detriment: Organizational constraints motivate Machiavellians to undermine their peers. *Personality and individual differences*, *104*, 29-36.

36.   Jonason, P. K., Wee, S., & Li, N. P. (2015). Competition, autonomy, and prestige: Mechanisms through which the Dark Triad predict job satisfaction. *Personality and Individual Differences*, *72*, 112-116.

37.   Hirschi, A., & Jaensch, V. K. (2015). Narcissism and career success: Occupational self-efficacy and career engagement as mediators. *Personality and Individual Differences*, *77*, 205-208.

38.   Volmer, J., Koch, I. K., &Göritz, A. S. (2016). The bright and dark sides of leaders' dark triad traits: Effects on subordinates' career success and well-being. *Personality and Individual Differences*, *101*, 413-418.

39.   Hussain, A., Mkpojiogu, E.O.C., Jamaludin, N.H., Moh, S.T.L. (2017).A usability evaluation of Lazada mobile application. AIP Conference Proceedings, 1891.

40.   Sarkawi, M. N., Jaafar, A. R., Shamsuddin, J., & Rahim, N. F. A. (2017). Impact of growth need strength on the relationship between career salience and job satisfaction. *International Journal of Economic Research, 14*(16), 619-627.

41.   Dotta, B.T., Karbowski, L.M., Murugan, N.J., Persinger, M.A. Incremental shifts in ph spring water can be stored as "space-memory": Encoding and retrieval through the application of the same rotating magnetic field (2013) NeuroQuantology, 11 (4), pp. 511-518.

42.   Chang, Y.-F. A testable application of nonlinear whole neurobiology: Possible transformation among vision and other sensations (2013) NeuroQuantology, 11 (3), pp. 399-404.

43.   Gupta,T., & Sharma,A. (2014). Search Accuracy in Web information Retrieval. International Journal of Communication and Computer Technologies, 2(2), 98-105.

44.   Kakavand, Z.M., & Chalechale, A. (2015). Comparison of Two Different Distance Functions of Image Retrieval for Detecting Species of Microscopic Fungi in Medical Mycology Laboratory. International Academic Journal of Science and Engineering, 2(4), 39-44.