

Original Article

The Relationship Between Mental Disorders, Emotional Intelligence and Criminal Thinking

Mostafa Abouzari, Mina Mozhdehi*.

*correspondence: mmozhdghi619@gmail.com, <https://orcid.org/0000-0002-8931-0819>

Abstract:

Introduction: Mental disorder is a general term used for describing a wide range of psychiatric disorders which compromise a person's ability for thinking, feeling and functioning properly in society. Mental disorder is a behavioral or psychological syndrome or pattern that appears in an individual and can bring hardship and disability with it, and he/she is usually reviewed as bizarre or annoying by other people. These disorders can manifest themselves as extreme rage, resentment, fear and confusion. Some mental disorders can easily affect professional and social life of the patient and leave him/her incapacitated. There is a relationship between mental disorders and emotions; emotions play a major role in the emergence of dysfunctional behaviors or mental disorders. Emotional dysregulation can threaten mental and psychological health of a person. The aim of the present study is assessing the relationship between mental disorders, emotional intelligence and criminal thinking (A case study of prisoners incarcerated in Yazd province).

Methods: This is a correlational research. Statistical population was the whole prisoners incarcerated in Yazd province in 2019. Sample size was 147 prisoners whom were chosen via stratified-random sampling method. For research tools we used questionnaires presented in the following texts: Wong and Law emotional intelligence scale, symptom checklist (SCL-25) and Knight et al. an assessment for criminal thinking were uses. Statistical analysis was carried out using SPSS ver. 22 and Smart PLS. Pearson correlation coefficient, regression and path analysis tests were performed.

Findings: A negative correlation was found between emotional intelligence and mental disorders. A positive correlation was calculated between mental disorders and criminal thinking, and finally a negative correlation was found between emotional intelligence and criminal thinking. Emotional thinking was found to be an important mediator variable between mental disorders and criminal thinking.

Conclusion: Based on the results, it is concluded that mental disorders and criminal thinking have influence on criminal behaviors of perpetrators. This result indicates that while studying the etiology of criminality, judicial authorities and law enforcement should consider cognitive impairments and problematic thinking styles as important factors.

Keywords: mental disorders, emotional intelligence and criminal thinking.

Submitted: 12 April 2020, Revised: 27 June 2020, Accepted: 5 June 2020

Introduction:

Mental disorder is a behavioral or psychological syndrome or pattern that appears in an individual and manifests itself

with discomfort (a painful symptom), disability (in one or more important functional aspects) and elevates the risk of death or loss of freedom.

Crime is a complicated social phenomenon which is reviewed differently in various social environments. The definition of crime and criminal behavior depends on the judicial laws and social norms of every society. Although in general every act or failure to act that is punishable by law is defined as crime (1), but studying crime just from judicial point of view is insufficient. Instead, most criminologists, psychiatrists and psychologist agree that crime can be studied from four different aspects namely biological, psychological, social and judicial (2).

According to Bandura mediational processes are determinant factors of human behaviors. Internalized standards, perceived self-adequacy and moral beliefs are important factors in behavioral self-regulation. The fact that we are able to imagine ourselves in every possible emotional state can further prove the huge effects mediational processes have on humans. We can feel rage, nausea, calmness and sexual arousal just by thinking about different things; therefore, according to Bandura behaviors can be highly controlled by imaginations. Since the behavior is at least partly determined by mediational processes, failure of these processes to properly reflect reality, can lead to demonstration of maladjusted behaviors (3). Studying the relationship between criminal thinking and criminal behavior is not a novel idea. Sykes and Matza (1958), defined misdemeanor based on five neutralization concepts: denial of responsibility, denial of injury, denial of the victim and appeal to higher loyalties. It is presumed that criminal thinking manifests itself as specific thinking styles that lead criminals to display antisocial behaviors. In

fact the concept of “criminal personality” focuses on a range of behaviors such as justifications and rationalizations; regardless of how variable these behaviors may be or whether they are observed in criminals or not (37). In order to define criminal behavior and criminality, several models have been proposed namely the social development model (5) and complementarity (6). Cognitive distortion is a shared quality among all criminals (7, 8). People who have a tendency toward criminal behaviors suffer from cognitive distortion and this quality paves the way of criminality and facilitates the displaying of criminal behaviors (9, 7).

Nowadays, this is believed that emotions are the driving force behind antisocial behaviors and improper emotional processing threatens the mental and psychological health of an individual (10). Emotional intelligence is composed of a series of linked cognitive and emotional abilities which help an individual to gain awareness of his/her emotions that control his/her behaviors (11), with balancing his/her emotions and thoughts, an individual can make sensible and responsible decisions (12). In fact emotional intelligence is a multifactorial ability consisted of a set of social abilities and expertise which affect an individual’s ability for recognition, comprehension and management of emotions, solving problem and adaptability and effectively enables an individual to adapt to needs, pressures and challenges of life (13). From the texts, it can be inferred that the successful adaptation to environment highly depends on harmony among various components of emotional intelligence. Gaining the ability to adapt to stressful incidents, setting proper goals for the future

and coping with chronic anxieties, all highly depend on level of emotional intelligence of an individual (14). Tett and Fox (2006) also concluded that emotional intelligence has a significant negative correlation with misdemeanor, stress and depression in high school pupils (15).

Mental disorder is a syndrome which is characterized by significant cognition, emotions or behaviors disorders. Dysfunction of psychological, biological or developmental processes, constitute the foundation of mental disorders. Deviation from social norms is the general criterion for diagnosis of mental disorders. Each mental disorder has its own signs and symptoms, and they are divided into 17 classes and 375 of them are named (16). Studies have shown that mental disorders especially personality disorders have higher prevalence among criminals (17). Some studies performed on prisoners incarcerated in Iran, indicated that about 87% of prisoners are suspected of suffering from some kind of mental disorders (18). Today more than 220000 individuals are incarcerated throughout the country and this number is three times more than total standard capacity of prisons (19). Mental disorders and inadequate social conditions constitute the root of criminality and no single theory can explain various criminal behaviors (20). Experts believe most crimes are deeply rooted inside the personality of an individual. They back up the idea that criminals are patients who are in need of treatments (21). Therefore, assessing mental health of prisoners and providing mental healthcare services for these at risk group is a concern of mental health scholars around the world. Studying the issues of criminals and

prisoners, especially their mental disorders still remains one of the most controversial subjects. Data of epidemiological studies (distribution of mental disorders, quality of available mental healthcare services and diagnosis of mental disorders) enable responsible authorities to provide mental healthcare services in accordance with requirements of each region. Although the results of these kinds of studies can be beneficial in many cases, but extension of research findings should be done with extra care because cultural, economic and social backgrounds can vary to a great extent (22).

With performing psychological researches and studying driving forces of crime and the effects of mental disorders, emotional intelligence and criminal thinking styles on criminality, not only preventing the growth of criminality but also finding proper methods for rehabilitating and correcting prisoners becomes possible. The present study was performed in order to investigate the relationship between mental disorders, emotional intelligence and criminal thinking among prisoners incarcerated in Yazd province, Iran during 2019.

Research hypotheses

- ✓ Hypothesis 1: There is a significant positive correlation between mental disorders and emotional intelligence.
- ✓ Hypothesis 2: There is a significant positive correlation between mental disorders and criminal thinking.
- ✓ Hypothesis 3: There is a significant positive correlation between emotional intelligence and criminal thinking.

Methods:

Based on the condition and the subject of the study, survey research was performed. This is an applied research seeking to solve problems. Since data were gathered from questionnaires filled by prisoners of Yazd province prisons, the research method is descriptive and correlational. In addition, quantitative data were also gathered. To this end, standard questionnaires about evaluating mental disorders, emotional intelligence and criminal thinking were also distributed among prisoners of Yazd prisons. Statistical community of this study consisted of 147 prisoners of Yazd prisons who at least had high school diplomas and were incarcerated during 2019 for theft, murder, crimes against public decency and morality, addiction to drugs and indebtedness. After proper warrants were obtained from prison headquarter, this study was carried out during three months in 2019 in Yazd prisons. In order to perform Stratified-random sampling, prisoners were divided into five groups according to their crimes: financial crimes, theft, drug addiction and possession of drugs, murder and accessory to murder and crimes against public decency and morality. Afterwards some members of each group were randomly chosen. During the course of this study the following questionnaires were distributed among these participants.

Wong and Law Emotional Intelligence Scale questionnaire (2002):

Wong and Law emotional intelligence scale questionnaire (2002) was used for assessing emotional intelligence. Responses were measured with a 5-point Likert-type scale This questionnaire contains 16 questions, and

responses are designated (1) strongly disagree; (2) disagree; (3) neither agree nor disagree; (4) agree; and (5) strongly agree according. This questionnaire is divided into four subscales of the self-emotion appraisal (four items), the others' emotion appraisal (four items), regulation of emotion (four items) and the use of motion (four items). Wong and law (2002) reported the questionnaire reliability for the self-emotion appraisal, the others' emotion appraisal, regulation of emotion and the use of motion to be 0.60, 0.84, 0.78 and 0.72 respectively. Cronbach's alpha test was performed in the present study and the reliability of this questionnaire was found to be 0.82, 0.90, 0.90 and 0.80 for the self-emotion appraisal, the others' emotion appraisal, regulation of emotion and the use of motion respectively.

Psychological Symptoms Checklist (SCL-25) questionnaire:

This scale is a shortened version of symptom checklist-90-R (SCL-90-R) and is used for mental health assessment. This scale was prepared and evaluated by Najarian, and Davoodi (2001) (23) and includes 25 questions belonging to the following 9 subscales: somatization (six items), obsessive-compulsive (three items), interpersonal sensitivity (three items), depression (two items), anxiety (three items), phobic (three items), paranoid thinking (one item), psychoticism (three items) and additional items (one item). Responses were measured with a 5-point scale of discomfort (from none to extremely).

An Assessment for Criminal Thinking (knight et al. 2006) questionnaire:

In a joint research with federal bureau of prisons, Knight et al. (2006), of Texas Christian University prepared this scale for assessing criminal thinking. This questionnaire contains 37 items and calculates six aspects of cognitive impairments, antisocial beliefs and attitudes (8, 4) which are connected to criminal behaviors. These six scales are: entitlement (a sense of ownership and privilege and misidentifying desire as need), justification (minimizing the seriousness of antisocial acts and justifying actions based on external circumstances), personal irresponsibility (unwillingness to accept responsibility and casting blame on others), power orientation (outward display of aggression in an attempt to control external environment and situations), cold heartedness (lack of emotional involvement with others) and criminal rationalization (negative attitude toward law and authority figures). Responses were measured with a 5-point Likert-type scale (from strongly agree to strongly disagree). Questions 1, 7, 13, 18, 19 and 28 were reverse scored. Reliability of the questionnaire was reported by knight et al. (2006) to be 0.80, 0.72, 0.75, 0.66, 0.64 and 0.63 for entitlement, justification, power orientation, cold heartedness, criminal rationalization, personal irresponsibility respectively.

Findings:

In order to assess and test the hypotheses, descriptive statistics and inferential statistics methods were used and Pearson correlation coefficient significance test was carried out. In order to determine the role of each variable, path analysis was used. SPSS ver. 22 and Smart PLS software were utilized for

this research. According to results of descriptive analysis, 34% of participants were female and 66% were male; 8% were younger than 25 years old, 85% were between 26 and 50 years old and 10% were older than 51 years old; 76% had high school diplomas and associate degrees, 16% had bachelor's degrees and 8% had master's and higher degrees. 52% of participants were addicted to drugs and 48% were not addicted to drugs. For 38% it was the first detention; for 21% it was the second detention; for 16% it was the third detention; and for 25% it was over the third detention. For 45% it was the first conviction; for 22% it was the second conviction; for 11% it was the third conviction; and for 22% it was over the third conviction. 18% had period of imprisonment of one year; 27% had period of imprisonment of one to three years; and 55% had period of imprisonment of more than three years. 10% were incarcerated for financial crimes; 22% for theft; 58% for drug addiction and possession of drug; 7% for murder and accessory in murder; and 3% for crimes against public decency and morality. Table 1 displays the correlation coefficient among variables.

As shown in the table 1, the correlation coefficient between emotional intelligence and mental disorders is -0.649, and the significance level (0.003) is below 0.05, therefore we conclude that there is a significant negative correlation between emotional intelligence and mental disorders. The correlation coefficient between mental disorders and criminal thinking is 0.670 and the significance level (0.004) is below 0.05, therefore we conclude that there is a significant positive correlation between mental disorders and criminal thinking. Furthermore, the correlation coefficient between emotional intelligence and criminal

thinking is -0.742 and the significance level (0.011) is below 0.05, therefore we conclude that there is a significant negative correlation between emotional intelligence and criminal behaviors. Structural equation modeling (SEM) technique in standards coefficients estimation mode will be discussed next. Table 2 displays the influence coefficients of variables. As shown in table 2, influence coefficient of mental disorders on emotional intelligence is -0.563 and since its p-value (0.006) is below 0.05, therefore we conclude that mental disorder has a significant negative influence on emotional intelligence. Influence coefficient of mental disorders on criminal thinking is 0.606 and its p-value (0.011) is below 0.05, therefore we conclude that mental disorders have significant positive influence on criminal thinking. Influence coefficient of emotional intelligence on criminal thinking is -0.739 and its p-value (0.023) is below 0.05, therefore we conclude that emotional intelligence has significant negative influence on criminal thinking.

Evaluating hypotheses

Hypothesis 1: there is a significant positive correlation between mental disorders and emotional intelligence.

Statistical hypotheses pertinent to this research hypothesis are:

H₀: there is no significant positive correlation between mental disorders and emotional intelligence.

H₀: $\beta = 0$

H₁: there is a significant positive correlation between mental disorders and emotional intelligence.

H₀: $\beta = 0$

As table 2 shows the significance level of this hypothesis is 0.006 and below 0.05, therefore it is concluded that there is a significant correlation between mental disorders and emotional intelligence. But since the influence coefficient is negative (-0.563), there is a significant negative correlation between mental disorders and emotional intelligence. Consequently, the first hypothesis is rejected.

Hypothesis 2: there is a significant positive correlation between mental disorders and criminal thinking.

Statistical hypotheses pertinent to this research hypothesis are:

H₀: there is no significant positive correlation between mental disorders and criminal thinking.

H₀: $\beta = 0$

H₁: there is a significant positive correlation between mental disorders and criminal thinking.

H₀: $\beta \neq 0$

As shown in table 1, the significance level of this hypothesis is 0.011 and below 0.05, therefore, there is a significant correlation between mental disorders and criminal thinking, but since the influence coefficient is positive (0.606) there is a significant positive correlation between mental disorders and criminal thinking. Consequently, the second hypothesis is accepted.

Hypothesis 3: there is a significant positive correlation between emotional thinking and criminal thinking.

Statistical hypotheses pertinent to this research hypothesis are:

H0: there is no significant positive correlation between emotional intelligence and criminal thinking.

H0: $\beta = 0$

H1: there is a significant positive correlation between emotional intelligence and criminal thinking.

H-0: $\beta = 0$

As table 2 shows, the significance level of this hypothesis is 0.023 and below 0.05, therefore, it is concluded that there is a significant correlation between emotional intelligence and criminal thinking. But since the influence coefficient is negative (-0.739), there is a significant negative correlation between mental disorders and emotional intelligence. Consequently, the third hypothesis is rejected.

Discussion:

As it was mentioned in the results, there is significant negative correlation between mental disorders and emotional intelligence. The results showed that there is a significant negative correlation between total emotional intelligence and its components clarity, mood repair and anxiety disorder. This means prisoners who had higher anxiety, had lower total emotional intelligence, emotional clarity and emotional repair. This data aligns with theories and researches of Mennin et al. (2002, 2004 and 2005) (24, 25, 26), Summerfeldt et al. (2010) (27), Turk et al. (2004) (28), McLaughlin et al. (2007) (38), Sunil and Rooprai (2009) (30), Siu (2009) (31), Fernandez-Berrocal et al. (2006) (32) and Roemer et al. (2009) (33), who showed there is low emotional intelligence and

emotional dysfunction in anxiety disorder patients.

In general, the data of the present study indicated that prisoners who experience more anxiety had lower awareness of the nature of their emotions and have lower ability to deal with the negative emotions they had experienced in the past. In other words, these people had problems regarding emotional intelligence and its components. They suffer from emotional maladaptation and their emotional intelligence elements were damaged.

As shown in the results, there is a significant positive correlation between mental disorders and criminal thinking and this result is comparable to that of a similar research (34). Other similar researches which focused on prisoners showed that mental disorders have high prevalence among prisoners (incarcerated in jails or asylums). Therefore, alongside the criminological and sociological aspects of the crimes that the convicts commit, judicial forces need to consider the psychological aspects as well. Based on the result it can be deduced that the only variable which has a significant positive correlation with criminal thinking is mental disorders; to put it another way, variable of mental disorders with a significance level lower than 0.05, act as a powerful internal factor and has a direct relationship with criminal thinking.

A significant negative correlation was observed between emotional intelligence and criminal thinking, and this result is in accordance with previous studies (35). In the last decade, in psychology and especially criminal psychology, more attention has been paid to emotional and sentimental conditions,

and the effects of emotions on actions of violent criminal and sex offenders are continuously being studied. The most prominent emotions in violent crimes is rage; and this emotion is the driving force behind variety of violent crimes such as murder, assault, accessory in crime, and physical and sexual abuse. The experts believe these criminals lack empathy and this defect plays the major role in these crimes (36). Other studies have shown that there is a contrary relationship between emotional intelligence and criminal and antisocial behaviors. Therefore, emotional intelligence is a suitable predictor for the future criminal actions. There is a strong negative relationship between criminal thinking and emotional intelligence; therefore there is a negative relationship between emotional intelligence, mental disorders and antisocial behaviors.

We faced some limitation during the course of this study. First of all this study was carried out in one prison of one city (Yazd), and naturally the results do not represent all the prisoners of the country. Although the most important mental disorders were studied in this research, but some disorders such as sexual dysfunctions and childhood and adolescence mental disorders were not included. The other limitation we faced was that the responses the prisoners gave to questions regarding misuse of drugs and related disorders might have been dishonest. Based on present data, we would like to offer the following suggestion:

1. In order to provide proper mental and medical services for prisoners, a data bank of psychological conditions of prisoners

throughout the country be prepared, so that service providing can become purposeful and in accordance to prevalent mental disorders.

2. Considering the high prevalence and severity of mental disorders, psychiatric consultation and drug therapies become available in prisons.

3. A place be allocated for family therapy for prisoners who suffer from mental disorders.

4. Negotiations with the judicial authorities on penalty abatement for prisoners who suffer from mental disorders be carry out and social worker support becomes available for them.

5. Specific therapy protocols be designed for prisoners, so that errors and multiplicity be reduced.

Using self-report for anxiety evaluation was another limitations of this study, therefore we suggest in future studies in addition to questionnaires, clinical interviews be performed for this variable. The data regarding this disorder cannot be extended to clinical population. Therefore, future studies can evaluate the relationship between emotional intelligence and its components in clinical populations who suffer from this disorder and have been chosen based on clinical interviews. Considering the inability of the participants in controlling their emotions, teaching emotion control and regulation techniques to them can result in improvement of their emotional intelligence and reduction of crime.

Another limitation of the present study was that most prisoners were unlearned and social

workers based in prisons came to their aide. Furthermore, cultural, economic and social differences and variety of crimes the prisoners had committed were not considered in this study, therefore generalizing research findings to other populations should be exercised with caution. Focusing on mentioned differences can be a subject for future studies. Since unlike cognitive intelligence, emotional intelligence can be improved and learned, prison employees and wardens are advised to make emotional intelligence education of prisoners (especially emotional management) and providing related supportive services a priority. Finally, by identifying cognitive errors and criminal thinking styles of prisoners and applying proper cognitive interventions, it is possible to change their improper thinking patterns to something acceptable for society.

Conclusion:

Based on the results, it is concluded that mental disorders and criminal thinking have influence on criminal behaviors of perpetrators. This result indicates that while studying the etiology of criminality, judicial authorities and law enforcement should consider cognitive impairments and problematic thinking styles as important factors.

References:

1. Goldouzian A. (2004). Public criminal law, Vol. 1, Faculty of Law and Political Science of University of Tehran.
2. Farrington D, Biron L, LeBlanc M. Personality and delinquency in London and Montreal. In John Gunn and David P. Farrington (1982), *Abnormal Offenders,*

Delinquency, and the Criminal Justice System. New York: Wiley.

3. Olson MH and Hergenhahn BR. (2001). *Introduction to theories of learning* (A., K., Seif Trans.). 6th Edition. Tehran. Iran. Doran press.
4. Walters GD. (2003). Changes in criminal thinking and identity in novice and experienced inmates: Prisonization revisited. *Criminal Justice and Behavior*, 30, 399-421.
5. Catalano RF & Hawkins JD. (1996). *The social development model: A theory of antisocial behavior.* Cambridge University Press.
6. Wong, CS & Low KS. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study . *The Leadership Quarterly*, 13, 243-274 .
7. Samenow SE. (1984). *Inside the criminal mind.* USA: Times Books.
8. Yochelson S & Samenow SE. (1976). *The criminal personality: Vol. 1. A profile for change* New York, NY: Jason Aronson.
9. Howitt D. (1995). *Paedophiles and sexual offences against children.* John. Wiley.
10. Khodapanahi MK. (2002). *Excitement and emotion.* Tehran. Iran. Samt Press..
11. Myers-caruso-emotionalsocial intelligence 1999.
12. Barekatin M, Tavakoli M, & Taher Neshatdoost H. (2008). Emotional quotient in women who had attempted suicide by poisoning. *Iranian Journal of Psychiatry and Clinical Psychology*, 14, 169-175.

13. Bar-On R. (2006). The Bar-On model of emotional social intelligence. *Psicothema*. Vol 18. pp 13.
14. Chan DW. Emotional intelligence, social coping and psychological, distress among chines gifted students in Hong Kong. *High Ability Studies* 2005. vol 16. pp 16378.
15. Tett RP and Fox KE. Confirmatory factor structure of trait emotional intelligence in student and worker samples. *Pers Individ Dif*. 2006; 41(6): 1155-1168.
16. Association AP. Diagnostic and statistical manual of mental disorders (DSM-5®). USA: American Psychiatric publications; 2013.
17. Chang Z, Lichtenstein P, Larsson H, Fazel S. Substance use disorders, psychiatric disorders, and mortality after release from prison: a nationwide longitudinal cohort study. *Lancet Psychiatry*. 2015;2(5):422-30.
18. Shams A. Pathology of prison. Tehran: Rahe tarbiyat; 2004
19. Jahangir A. Number of prisoners-country-how much? Tehran, Iran: Mashregh news; 2017.
20. Sotoudeh H. [Criminal Psychology]. Tehran: Avae noor; 1998. 300 p.
21. Morgan RD, Flora DB, Kroner DG, Mills JF, Varghese F, Steffan JS. Treating offenders with mental illness: a research synthesis. *Law Hum Behav*. 2012; 36(1):37-50.
22. Fazel S, Danesh J. Serious mental disorder in 23 000 prisoners: a systematic review of 62 surveys. *The Lancet*. 2002; 359(9306):545-50.
23. Najarian, B., and Davoodi, I. Construction and validation of a short form of the SCL-90-r (SCL-25). 2001: 136-149.
24. Mennin DS, Heimberg R, Turk CL, Fresco DM. Applying an emotion regulation framework to
 - a. Integrative approaches to generalized anxiety disorder. *Clin Psychol* 2002; 9: 85-90.
25. Mennin DS, Heimberg RG, Turk CL, Fresco DM. Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behav Res Ther* 2005; 43: 1281-310.
26. Mennin DS, Turk CL, Heimberg RG, Carmin CN. Focusing on the regulation of emotion: A new
 - a. Direction for conceptualizing and treating generalized anxiety disorder. In: Reinecke MA, Clark DA. (Editors). *Cognitive therapy over the lifespan: Theory, research and practice*. New York: Wiley; 2004: 60-89.
27. Summerfeldt LJ, Kloosterman PH, Antony MM, McCabe RE, Parker JD. Emotional intelligence in social phobia and other anxiety disorders. *J Psychopathol Behav* 2010; 33(1): 69-78.
28. Turk CL, Heimberg RG, Mennin DS. Assessment. In: Heimberg RG, Turk CL, Mennin DS. (editors). *Generalized anxiety disorder: advances in research and practice*. New York: Guilford; 2004: 219-47.
29. Myers-caruso-emotionalsocial intelligence 1999.
30. Sunil K and Rooprai KY. Role of emotional intelligence in managing stress and anxiety at workplace. *Proceeding of the ASBBS Annual Conference*; 2009, Las Vegas, USA, 2009.

31. F Y Siu A. Trait emotional intelligence and its relationships with problem behavior in Hong Kong adolescents. *Pers Individ Dif* 2009; 47: 553-7.

32. Femandez-Berrocal P, Alcaide R, Extremera N, Pizarro D. The role of emotional intelligence in
 a. Anxiety and depression among adolescents. *Pers Individ Dif* 2006; 4: 16-7.

33. Roemer L, Lee JK, Salters-Pedneault K, Erisman SM, Orsillo SM. Mindfulness and emotion regulation difficulties in generalized anxiety disorder: Preliminary evidence for independent and
 a. Overlapping contributions. *Behav Ther* 2009; 40: 142-54.

34. Baherhmand M. (2019). Mental disorders Relationship with misdemeanor and committing crime. *Ghanonyar journal of civil & legal sciences*, 3 (10), pp. 203-240.

35. Yarinassab F, Amini K, Salari A. (2019). Level of emotional intelligence of male prisoners of Yasuj central prison.. *Ghanonyar journal of civil & legal sciences*, 3 (9), pp. 327-335.

36. Kebell MR, Davies GM, Hawells K and Stecey J. (2006). *Practical psychology for forensic investigation and prosecution*. England. Johnwilley and sonsltd.

37. Sykes GM. & Matza D. (1957). *Techniques of neutralization: A theory of delinquency*. *American sociological review*, 22(6), 664-670.

38. McLaughlin KA, Mennin DS and Farach FJ. (2007). The contributory role of worry in emotion generation and dysregulation in generalized anxiety disorder. *Behaviour Research and Therapy*, 45(8), pp.1735-1752.

Tables and Charts:

Table 1: Correlation coefficient.

	Emotional intelligence	Mental disorders	Criminal thinking
Emotional intelligence	1	-0.649 (0.003)	-0.742 (0.011)
Mental disorders	-0.649 (0.003)	1	0.670 (0.004)
Criminal thinking	-0.742 (0.011)	0.670 (0.004)	1

Table 2: Testing research hypotheses using structural equation modeling.

path	influence coefficient	T -test	p-value	Significant Correlation
-------------	------------------------------	----------------	----------------	--------------------------------

Path of mental disorder to emotional intelligence	-0.563	-8.729	0.006	Confirmed
Path of mental disorders to criminal thinking	0.606	9.657	0.011	Confirmed
Path of emotional intelligence to criminal thinking	-0.739	-11.170	0.023	confirmed

Figure 1: The structural equation model.

