

Predicting Addiction Proneness Based on Emotional Intelligence, Moral Intelligence, Mental Health, and the Mediation of Life Stressful Events in Working Children

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ABSTRACT

Objective: This study aimed to predict addiction proneness based on emotional intelligence, moral intelligence, mental health, and the mediation of life stressful events in working children in Tehran.

Methods and Materials: This correlational study employed structural equation modeling. The statistical population included all working children aged 12 to 18 in Tehran in 2024. A total of 215 participants were selected using a non-random convenience sampling method. Data were collected using a demographic questionnaire, the Addiction Proneness Scale (APS), the Emotional Intelligence Questionnaire (EIQ), the 25-Symptom Checklist (SCL-25), the Lennick and Kiel Moral Intelligence Questionnaire (MIQ), and the Life Stressful Events Questionnaire by Khodayari Fard and colleagues. The reliability of the tools was assessed through internal consistency, using Cronbach's alpha coefficient. Data were analyzed using SPSS-24 and AMOS-24.

Findings: The findings indicated that mental health ($P = 0.001$, $\beta = 0.365$), emotional intelligence ($P = 0.005$, $\beta = -0.251$), and moral intelligence ($P = 0.001$, $\beta = -0.359$) predict addiction proneness in working children. Life stressful events mediated the correlation between mental health ($P = 0.001$, $\beta = 0.128$) and addiction proneness. Life stressful events also mediated the correlation between emotional intelligence and addiction proneness ($P = 0.029$, $\beta = -0.067$). Notably, the indirect path coefficient between moral intelligence and addiction proneness was not statistically significant.

Conclusion: Based on the study findings, there is a significant relationship between addiction proneness and emotional intelligence, moral intelligence, and mental health. Life stressful events mediate the relationship between addiction proneness, emotional intelligence, and mental health.

Keywords: Addiction proneness, Emotional intelligence, Moral intelligence, Mental health, Stressful events, Working children.

1. Introduction

The World Health Organization (2017) describes child labor as any work performed by a child under the legal working age that deprives the child of their childhood in exchange for a reward. Child labor can lead to severe physical and psychological harm and even death. According to the latest International Labour Organization statistics, 152 million children worldwide are child laborers, approximately 10% of the global child population. Of these, 73 million engage in hazardous work. Including children whose work is deemed legal under various national laws but who are under the international minimum working age of 18, the number rises to 218 million (International Labour Organization, 2017). These figures highlight a concerning prevalence of children out of school, where many are seen navigating traffic during school hours and are often sexually exploited for minimal compensation (Chukwudeh & Oduaran, 2021). UNICEF defines child laborers as children under 18 years of age who spend most of their time without adult supervision or oversight, engaged in low-level jobs (UNICEF Iran, 2017). The consequences of child labor, particularly for street children, include exposure to drugs, initiation into smoking, and solicitation for illegal activities (Khouseh Solook, 2024; Moltafet et al., 2021; Navabinejad, 2024; Taghizadeh et al., 2024). Modern societies are grappling with the immense challenge of addiction, defined as the pathological dependence on the use of one or more substances, which creates a compulsion for increased consumption and, in its absence, withdrawal symptoms (Krasanakis, 2017).

Given the extensive harm addiction poses, particularly to children, identifying its associated factors is crucial. Research indicates that various psychological, social, and familial factors contribute to addiction susceptibility (Savage et al., 2016). One variable in this research, linked to addiction vulnerability, is emotional intelligence. Emotional intelligence is defined as the ability to perceive, understand, and effectively use emotions as a resource for human endeavors, knowledge, relationships, and influence on others (Meyers et al., 2006). This aspect of intelligence enables children and adolescents to comprehend their emotions, thus guiding their actions and behaviors (MacCann et al., 2020). Emotional intelligence encompasses a set of skills and abilities that can be enhanced. Identifying related variables and explaining them can provide a foundation for improvement (Guerra-Bustamante et al., 2019; Jebraeili & Habibi, 2016). One of the recent theories

explaining addiction posits that individuals use drugs or substances to escape distressing emotional states and emotional tensions. Theorists argue that emotionally intelligent individuals better understand peer pressures, control and manage their emotions, and exhibit greater resistance to substance use. Conversely, those with lower emotional intelligence often resort to substance use as a coping mechanism for negative emotions (Jebraeili & Habibi, 2016; Kanesan & Fauzan, 2019; Penga et al., 2019). A study by Ottonello et al. (2014) demonstrated that individuals with strong emotion regulation skills, which enhance their tolerance for negative emotions, reported lower rates of addiction (Ottonello et al., 2019).

Another variable investigated in this study, with respect to addiction vulnerability, is moral intelligence. Studies suggest a significant negative relationship between moral intelligence and the tendency toward substance abuse. Moral intelligence is an emerging concept that has been less explored compared to other forms of intelligence but offers considerable potential to enhance our understanding of learning and behavior (Coles, 1998). It refers to the ability to apply ethical principles to values, goals, and actions. Lennick and Kiel define moral intelligence as the breadth of the human mind and spirit to recognize universal human principles and use them to guide personal values, aspirations, goals, and actions. Core principles include integrity, responsibility, compassion, and forgiveness. Among these dimensions, integrity demonstrates the strongest correlation with addiction vulnerability (Yaghoubi et al., 2022).

Mental health is another factor potentially influencing addiction vulnerability. Substance abuse represents a significant global public health risk, with direct implications for health outcomes (Nobakht et al., 2016; Skiba et al., 2004; Sohrabi et al., 2019; Tanhaye Reshvanloo & Saadati Shamir, 2015). Mental health, as defined by the World Health Organization, is a state of personal well-being wherein individuals recognize their abilities, adapt to life's pressures, and contribute productively to society. The modern era, with its associated challenges, has seen a dramatic rise in mental health issues and addiction. Evidence shows a direct link between substance abuse and poor mental health, including aggression and other behavioral issues. Studies suggest that mental health plays a crucial role in enhancing quality of life and protecting individuals from risk factors. People with better mental health are less likely to misuse substances, even when exposed to opportunities for substance use, as they are aware of the potential consequences (Skiba et al., 2004).

Stressful life events also appear to significantly influence addiction vulnerability. Such events, often sudden and unforeseen, include the death of loved ones, unemployment, illness, and other crises. Street children frequently experience stressors such as sexual, physical, and psychological abuse, as well as health and hygiene challenges and police mistreatment. Research indicates a positive association between the frequency of stressful events and addiction risk. Roberts et al. (2014) found that life stressors strongly predict risky behaviors, including addiction (Roberts et al., 2018). Holmes and Rahe (1967) similarly reported that stress induced by life events increases vulnerability to substance use (Holmes & Rahe, 1967).

Various theories explain the emergence of child labor, with poverty being the most significant contributing factor. This issue has seen an increase in Iran due to various socio-economic factors (UNICEF Iran, 2017). Children living on the streets are at high risk of being drawn toward substance use (Chukwudeh & Oduaran, 2021). The lack of a safe residence and minimal resources makes these children highly socially vulnerable, often becoming entangled in addiction and drug-related crimes, such as trafficking (UNICEF Iran, 2017).

Given the long-term implications of addiction for these children and the broader public health consequences, identifying addiction risk factors is critical. Exploring the protective roles of emotional intelligence, moral intelligence, and mental health in mitigating risky behaviors is essential. Despite their significance, limited research in Iran has directly examined these factors in predicting addiction vulnerability among child laborers. The present study seeks to fill this gap by investigating whether emotional intelligence, moral intelligence, and mental health, individually and through the mediation of stressful life events, can predict addiction vulnerability among child laborers.

2. Methods and Materials

2.1. Study Design and Participants

This research is a descriptive-correlational study using structural equation modeling (SEM). The target population includes all working children aged 12 to 18 in Tehran. Kline suggests a minimum sample size of 200 for SEM, while Hooman and colleagues recommend a more conservative approach of 10 observations per independent variable (37). Based on the number of variables (12 parameters), the sample size was estimated at 215 participants, equivalent to

17 times the number of parameters (36,37). Sampling was conducted using a non-random, convenience method. Inclusion criteria included ages between 12 and 18, involvement in street vending, basic literacy, and willingness to complete the questionnaire. Exclusion criteria included failure to answer more than three items in any tool and unwillingness to continue participation.

Data collection was conducted using two approaches. First, the research team obtained approval from the Iranian National Institute for Medical Research Development (IRANDOC) and authorization from the Islamic Azad University, Tehran Central Branch. After providing the children with explanations on confidentiality, they were asked to answer the questionnaires carefully and completely. Children with smartphones were also allowed to submit their responses via domestic social media networks. The research was conducted in institutions supporting working children across Tehran. In the second approach, the researcher visited a volunteer charitable organization that provides educational services to working children and adolescents. After explaining the research to the staff, the organization was asked to distribute the questionnaire to interested adolescents. This phase of sampling was completed over one month. Participants were assured of voluntary participation, the freedom to withdraw, and anonymity. Informed consent was obtained, and ethical considerations, including confidentiality, were upheld.

2.2. Measures

2.2.1. Emotional Intelligence

Developed by Bar-On in 1996 and validated on 3,831 individuals from six countries, the EIQ contains 43 items across five subscales: intrapersonal skills (12 items), interpersonal skills (9 items), adaptability (7 items), coping with pressure (8 items), and public mood (7 items) (38,39). Responses are scored on a five-point Likert scale, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"), with a total score range of 43 to 215. Scores from 43–77 indicate very low emotional intelligence, 78–112 low, 113–146 moderate, 147–180 high, and 181–215 very high. Construct validity was assessed using the emotional-social intelligence scale, yielding a correlation of 0.36. Test-retest reliability over six months ranged from 0.72 to 0.80 (Jebraeili & Habibi, 2016; KaramiRad et al., 2015). For this study, Cronbach's alpha coefficients were 0.87 for intrapersonal skills, 0.81 for interpersonal skills, 0.75 for adaptability, 0.78 for stress control, and 0.76 for public mood.

2.2.2. *Moral Intelligence*

This questionnaire, developed by Lennick and Kiel, contains 40 items and four subscales: integrity, forgiveness, responsibility, and compassion. Responses are given on a five-point scale, from "Never" to "Always," scored from 1 to 5. The questionnaire demonstrated a Cronbach's alpha reliability of 0.96, and content and construct validity were satisfactory (40). In Iran, Cronbach's alpha was 0.90, with factor loadings of 0.64 for integrity, 0.81 for responsibility, 0.84 for compassion, and 0.83 for forgiveness (Gholizadeh & Manzari, 2019; Hamid et al., 2017; Jalalvand et al., 2019; Yaghoubi et al., 2022). In this study, Cronbach's alpha coefficients were 0.89 for integrity, 0.92 for responsibility, 0.64 for compassion, and 0.70 for forgiveness.

2.2.3. *Symptom Checklist-25 (SCL-25)*

This shortened form of the SCL-90, developed by Najarian and Davodi, assesses general psychological distress. Responses range from "Not at all" (0) to "Very much" (4) on a five-point Likert scale. Internal consistency reliability is high, with Cronbach's alpha ranging from 0.71 to 0.95 (42) (Tanhaye Reshvanloo & Saadati Shamir, 2015). In this study, Cronbach's alpha was 0.93.

2.2.4. *Addiction Potential*

Created by Weed et al. in Minnesota in 1992, the APS contains 41 items, including five lie-detection items, with two subscales measuring active and passive addiction proneness. Items are scored from 0 ("Strongly Disagree") to 4 ("Strongly Agree"), with a total score range of 0 to 164. A score above 21 indicates a tendency toward substance use. Test-retest reliability was reported as 0.84 for women and 0.89 for men over a two-week interval (Hamid et al., 2017;

KaramiRad et al., 2015; Sohrabi et al., 2019). In this study, Cronbach's alpha was 0.92 (44).

2.2.5. *Life Stressful Events*

Khodayari Fard and colleagues developed this 90-item questionnaire in 2001, based on Holmes and Rahe's stress scale and life events from Pichel's 1971 adolescent life events questionnaire. It covers nine areas, including behavioral habits, health, family issues, educational problems, emotional problems, bereavement, social issues, job and financial concerns, unexpected incidents, and marital concerns. Items are scored on an eight-point Likert scale to indicate stress severity. Reliability coefficients were 0.80 (split-half method) and 0.88 (Cronbach's alpha for the Likert-scale portion) (Mohammadi Ahmadabadi & Golestanejad, 2019).

2.3. *Data analysis*

Data were analyzed using descriptive statistics (mean, standard deviation) and SEM methods, assuming normality based on skewness, kurtosis, and Mahalanobis distance, and testing for multicollinearity using tolerance coefficients and variance inflation factors. Model fit was assessed using Chi Square ($p > 0.05$), Normed Chi Square (< 3), RMSEA (< 0.08), GFI (< 0.95), AGFI (> 0.90), CFI (< 0.95). Analyses were conducted with SPSS version 24 and AMOS version 24 using maximum likelihood estimation.

3. **Findings and Results**

The study sample included 215 working adolescents (69 females and 146 males) with a mean age of 14.87 years and a standard deviation of 1.31 years.

Table 1

Correlation Coefficients Among Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Mental Health	30.69	6.87	-											
2. Emotional Intelligence - Intrapersonal Skills	40.67	7.91	-0.40	-										
3. Emotional Intelligence - Interpersonal Skills	26.88	6.20	-0.28	0.25	-									
4. Emotional Intelligence - Adaptability	22.18	5.13	-0.32	0.39	0.41	-								
5. Emotional Intelligence - Stress Control	25.20	5.63	-0.20	0.26	0.54	0.33	-							
6. Emotional Intelligence - Public Mood	22.34	4.78	-0.34	0.48	0.42	0.48	0.37	-						
7. Moral Intelligence - Integrity	55.27	8.58	-0.40	0.36	0.16	0.20	0.23	0.22	-					
8. Moral Intelligence - Responsibility	40.69	7.35	-0.34	0.22	0.07	0.12	0.15	0.11	0.60	-				
9. Moral Intelligence - Compassion	13.80	2.90	-0.23	0.14	0.05	0.13	0.05	0.09	0.46	0.44	-			
10. Moral Intelligence - Forgiveness	27.34	5.65	-0.33	0.28	0.14	0.17	0.11	0.16	0.45	0.55	0.43	-		
11. Stressful Life Events	60.43	13.92	0.56	-0.51	-0.19	-0.17	-0.16	-0.34	-0.31	-0.21	-0.17	-0.24	-	
12. Addiction Proneness	51.59	9.67	0.65	-0.48	-0.31	-0.24	-0.26	-0.43	-0.53	-0.44	-0.31	-0.46	0.63	-

$p < 0.01$, $p < 0.05$

Table 1 presents the means, standard deviations, and correlation coefficients among mental health, stressful life events, emotional intelligence components, moral intelligence, and addiction proneness. The correlations between variables were consistent with theoretical

expectations in this field of research. As shown in Table 2, the assumptions of univariate normality were assessed using skewness and kurtosis for each variable, and multicollinearity was evaluated through tolerance values and variance inflation factors (VIF).

Table 2

Normality and Multicollinearity Assumptions

Variable	Skewness	Kurtosis	Tolerance	VIF
Mental Health	0.36	-1.05	0.55	1.81
Emotional Intelligence - Intrapersonal Skills	-0.26	0.10	0.56	1.77
Emotional Intelligence - Interpersonal Skills	-0.28	-0.25	0.61	1.63
Emotional Intelligence - Adaptability	0.01	-0.75	0.65	1.53
Emotional Intelligence - Stress Control	-0.73	-0.28	0.66	1.52
Emotional Intelligence - Public Mood	-0.03	-0.60	0.60	1.66
Moral Intelligence - Integrity	0.21	-0.27	0.52	1.94
Moral Intelligence - Responsibility	-0.25	-0.45	0.51	1.95
Moral Intelligence - Compassion	0.34	-0.57	0.69	1.44
Moral Intelligence - Forgiveness	0.16	-0.21	0.62	1.60
Stressful Life Events	-0.13	-1.14	0.55	1.82
Addiction Proneness	-0.21	-1.06	-	-

All skewness and kurtosis values for variables fell within ± 2 , indicating that the univariate normality assumption was met. Additionally, the tolerance values for predictor variables were greater than 0.1, and the VIF values were less than 10, satisfying the multicollinearity assumption. According to Meyers and colleagues, a tolerance below 0.1 and a VIF above 10 indicate multicollinearity. To assess multivariate normality, the Mahalanobis distance was analyzed. Skewness and kurtosis for this data were 0.85 and 0.46, respectively, within the ± 2 range, supporting the assumption of multivariate normality. Homogeneity of variances was also confirmed by examining the scatter plot

of standardized error variances. In this study, moral intelligence and emotional intelligence were considered latent variables in the measurement model. Figure 1 illustrates the assumption that intrapersonal skills, interpersonal skills, adaptability, stress management, and public mood are indicators of emotional intelligence, while honesty, responsibility, compassion, and forgiveness are indicators of moral intelligence. Confirmatory factor analysis (CFA) using AMOS version 24 and maximum likelihood estimation assessed the fit of the measurement model. Table 3 presents the fit indices for both the measurement and structural models.

Table 3

Fit Indices for Measurement and Structural Models

Fit Indices	Measurement Model	Structural Model	Cut-off Point
Chi-Square	53.59	99.76	-
Degrees of Freedom	26	47	-
Normed Chi-Square	2.06	2.12	< 3
Goodness of Fit Index (GFI)	0.949	0.930	> 0.90
Adjusted Goodness of Fit Index (AGFI)	0.912	0.883	> 0.85
Comparative Fit Index (CFI)	0.947	0.942	> 0.90
Root Mean Square Error of Approximation (RMSEA)	0.070	0.072	< 0.08

The fit indices from the CFA indicate an acceptable fit for the measurement model with the collected data. The highest factor loading was for the responsibility indicator ($\beta = 0.794$), while the lowest was for the stress management indicator ($\beta = 0.567$). Given that all factor loadings exceeded 0.32, these indicators were deemed suitable for measuring the latent variables in this study.

Following the assessment of the measurement model, the structural model's fit indices were estimated. The structural model hypothesized that emotional intelligence, moral intelligence, and mental health, with the mediation of stressful life events, are related to addiction proneness in working children. As shown in Table 3, the SEM analysis indicated an acceptable fit for the structural model with the

data. Thus, the structural model was considered well-fitting with the collected data. Table 4 presents the path coefficients between variables in the structural model.

Table 4

Path Coefficients for Direct and Indirect Relationships Among Variables in the Structural Model

Path Type	Path	Unstandardized Coefficient	SE	Standardized Coefficient	p-value
Direct	Mental Health → Stressful Life Events	0.469	0.088	0.418	0.001
	Moral Intelligence → Stressful Life Events	-0.166	0.218	-0.057	0.448
	Emotional Intelligence → Stressful Life Events	-1.103	0.455	-0.219	0.029
	Stressful Life Events → Addiction Proneness	0.319	0.060	0.307	0.001
	Mental Health → Addiction Proneness	0.276	0.079	0.237	0.001
	Moral Intelligence → Addiction Proneness	-1.026	0.199	-0.341	0.001
Indirect	Emotional Intelligence → Addiction Proneness	-0.965	0.452	-0.184	0.018
	Mental Health → Addiction Proneness	0.150	0.045	0.128	0.001
Total	Emotional Intelligence → Addiction Proneness	-0.352	0.156	-0.067	0.029
	Mental Health → Addiction Proneness	0.426	0.089	0.365	0.001
	Moral Intelligence → Addiction Proneness	-1.079	0.222	-0.359	0.001
	Emotional Intelligence → Addiction Proneness	-1.317	0.464	-0.251	0.005

The overall path coefficient between mental health and addiction proneness was positive ($\beta = 0.365$, $p = 0.001$), while the coefficients for emotional intelligence ($\beta = -0.251$, $p = 0.005$) and moral intelligence ($\beta = -0.359$, $p = 0.001$) were negative and significant. Additionally, the path coefficient between stressful life events and addiction proneness was positive and significant ($\beta = 0.307$, $p = 0.001$). The indirect path coefficient between mental health and addiction proneness was positive ($\beta = 0.128$, $p = 0.001$), while the indirect path coefficient between emotional

intelligence and addiction proneness was negative and significant ($\beta = -0.067$, $p = 0.029$). The indirect path coefficient between moral intelligence and addiction proneness was not statistically significant.

Based on these results, moral intelligence was directly related to addiction proneness, while mental health and emotional intelligence were both directly and indirectly (via stressful life events) related to addiction proneness in working children.

Figure 1

Standardized Parameters in the Structural Model

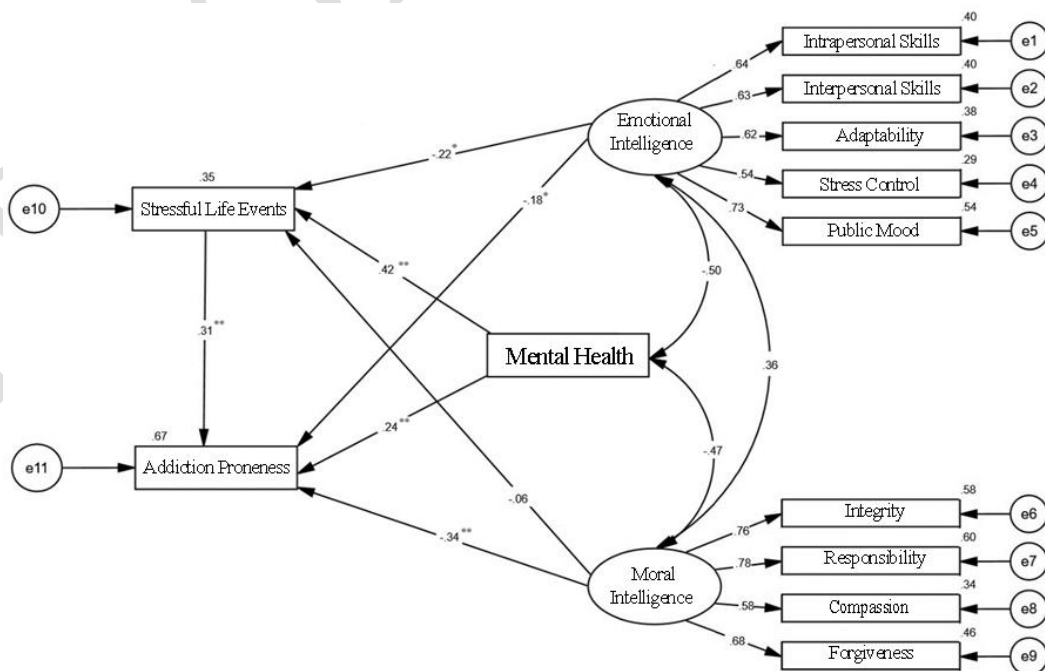


Figure 1 shows that the total multiple correlation squared (R^2) for addiction proneness in working children is 0.67, indicating that emotional intelligence, moral intelligence, mental health, and stressful life events collectively explain 67% of the variance in addiction proneness among working children.

4. Discussion and Conclusion

This study aimed to predict addiction proneness based on emotional intelligence, moral intelligence, mental health, and the mediation of stressful life events among working children.

The first finding showed that emotional intelligence negatively predicts addiction proneness, consistent with prior findings (Herman, 2015; Martins et al., 2010; Ottonello et al., 2019). No conflicting studies were found in the literature review. This result suggests that individuals with higher addiction proneness have lower emotional intelligence. In other words, these individuals struggle with recognizing, understanding, and managing emotions effectively. Such difficulties lead to challenges in making sound decisions, analyzing situations accurately, and reacting appropriately in stressful scenarios, often resulting in maladaptive behaviors like substance use. Substance abuse can be seen as an immature coping strategy that individuals with low emotional intelligence may resort to in difficult situations (Jebraeili & Habibi, 2016). Those with higher emotional intelligence can better regulate their emotions and impulses, thus demonstrating greater resistance to addiction. One of the foundational psychological skills is impulse control, which underlies all forms of emotional self-regulation. The capacity to prevent impulses from turning into actions and to suppress the initial reaction is crucial (Penga et al., 2019). Emotionally intelligent individuals are more adept at understanding peer pressures and managing their emotions, resulting in greater resistance to substance use. High emotional intelligence is thus a protective factor against substance use, while low emotional intelligence is a major risk factor, particularly among children and adolescents (KaramiRad et al., 2015).

The second finding indicated a direct and indirect relationship between mental health and addiction proneness among working children. Mental health was positively and significantly associated with addiction proneness. It is important to note that in this study, mental health was assessed using the SCL-25, where higher scores indicate lower mental health. Therefore, the positive relationship

between mental health scores and addiction proneness is logical. This finding aligns with previous research (Jameh Bozorg & Javdan, 2019; King et al., 2017; Nobakht et al., 2016; Skiba et al., 2004; Sohrabi et al., 2019). Mental health plays a crucial role in life quality and resilience against risk factors. Individuals with good mental health tend to use effective and constructive coping strategies, like problem-solving, in response to adverse emotional states. Problem-solving is a significant coping strategy that enhances personal and social growth while reducing psychological stress. However, individuals with poor mental health or disorders such as anxiety, depression, or obsessive-compulsive disorder may resort to quick, maladaptive solutions like substance abuse to escape negative emotional states. Maladaptive coping strategies are generally harmful and lead to greater stress and more negative emotions. In these strategies, individuals attempt to avoid or escape from stressors rather than confront and accept them, which over time contributes to mental health issues such as depression and anxiety, trapping them in a vicious cycle.

The third finding showed a relationship between moral intelligence and addiction proneness among working children, consistent with prior studies (Gholizadeh & Manzari, 2019; Hamid et al., 2017; Jalalvand et al., 2019; Kuther, 2000; Yaghoubi et al., 2022). This relationship suggests that individuals with high moral intelligence tend to align their actions with ethical principles, increasing their commitment, responsibility, and effectiveness in personal and group settings. Amonini and Donovan (2006) argued that most adolescents consider substance use, including drugs, alcohol, and marijuana, as moral failures under their circumstances. Adolescents who turn to substance use often base their decisions on moral judgments of right and wrong (Amonini & Donovan, 2006). Kuther's (2000) study also highlighted the role of moral intelligence in predicting substance use. Weak self-regulatory mechanisms play a significant role in leading individuals to engage in morally deviant behaviors like substance abuse (Kuther, 2000). Additionally, self-control, a component of moral intelligence, enables individuals to delay gratification and inhibit negative behaviors. Those with high moral intelligence exercise strong self-control, allowing them to reflect before acting, resist external and internal pressures, and manage temptations (Wiss et al., 2017). Rachlin (1995) noted that individuals with high self-control exhibit greater commitment, such as abstaining from tobacco use. Conversely, those with low self-control tend to seek excitement without regard for long-term consequences,

increasing their likelihood of engaging in risky behaviors like substance abuse (Rachlin, 1995).

Another finding suggests that stressful life events mediate the relationship between emotional intelligence and addiction proneness. Although no research specifically examines the mediating role of stressful life events between emotional intelligence and addiction proneness, other studies have investigated the relationships between addiction proneness, emotional intelligence, and stressful life events (Buccheri et al., 2018; Mohammadi Ahmadabadi & Golestanejad, 2019; Roberts et al., 2018; Schroder et al., 2017). Another finding indicates that stressful life events mediate the relationship between mental health and addiction proneness. Although no studies specifically explore the mediating role of stressful life events between mental health and addiction proneness, other research has examined the relationships between addiction proneness, mental health, and stressful life events (Mohammadi Ahmadabadi & Golestanejad, 2019; Roberts et al., 2018; Schroder et al., 2017). Individuals experiencing severe financial difficulties, insufficient income, or dissatisfaction were under significant stress, leading to depression symptoms. In response, these individuals may turn to substance use to relieve psychological stress and negative emotions.

A further finding showed that stressful life events do not significantly mediate the relationship between moral intelligence and addiction proneness in working adolescents. This means that individuals with varying levels of moral intelligence experience stress similarly. Research suggests that moral intelligence provides individuals with an overall perspective on life events, allowing them to reframe and reinterpret experiences and deepen their understanding (Guerra-Bustamante et al., 2019; Kanesan & Fauzan, 2019; KaramiRad et al., 2015; Martins et al., 2010; Penga et al., 2019). The study findings indicate that moral intelligence can directly predict addiction proneness. In contrast, stressful life events directly impact addiction proneness. However, this increased risk may occur independently of moral intelligence.

Therefore, stressful life events and moral intelligence may independently influence addiction proneness without one mediating the other. This could be due to the complex relationships between psychosocial factors and addiction proneness, involving multiple interacting variables that influence the process.

5. Limitations & Suggestions

This study has several limitations that should be acknowledged. First, the non-random, convenience sampling method limits the generalizability of the findings, as participants may not represent the broader population of working children. Second, self-report measures for emotional intelligence, moral intelligence, mental health, and addiction proneness may introduce bias due to social desirability or inaccuracies in self-assessment. Third, the cross-sectional design precludes establishing causation, only allowing for the examination of associations among variables. Lastly, cultural and contextual factors specific to the sample in Tehran may limit the applicability of findings to different settings or populations.

Future research should use a longitudinal design to better capture causal relationships between emotional intelligence, moral intelligence, mental health, and addiction proneness over time. Expanding the study to include diverse cultural contexts and employing random sampling techniques would enhance the generalizability of findings. Additionally, incorporating objective measures, such as observational assessments or biological markers for stress, could provide a more comprehensive understanding of these relationships. Exploring potential moderating factors, such as family support or educational interventions, may also offer insights into the conditions that influence addiction proneness in vulnerable youth.

The findings suggest that interventions targeting emotional and moral intelligence development may reduce addiction proneness among at-risk youth. Psychological and social service professionals working with working children should prioritize training in emotional regulation, problem-solving, and ethical decision-making. Additionally, organizations and policymakers can enhance preventive programs by addressing stress management and mental health services for working children, creating a supportive environment that may reduce their vulnerability to addiction. Schools and community programs could integrate these skills into curricula, fostering resilience and healthier coping mechanisms in children and adolescents.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Each participant received an informed consent form to understand the study's objectives.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed in this article.

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