A Mixed-Methods Explanatory Model of Impulsivity in Adolescent Drama Students: The Role of Family, School Stress, and Peer Influence

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Article

A Mixed-Methods Explanatory Model of Impulsivity in Adolescent Drama Students: The Role of Family, School Stress, and Peer Influence

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Abstract

Adolescents enrolled in drama classes face unique emotional and social demands that may challenge their self-regulation. This study investigated factors associated with impulsivity among drama students, examining the roles of lifestyle, family dynamics, academic stress, and vocational activities. A mixed-methods approach was employed: two focus groups with 28 upper-grade students (grades 11–12) identified key themes, including emotional overload, academic stress, and strained communication with parents. Based on these insights, a 77-item anthropological questionnaire was developed and applied to 90 ninth-grade students. Impulsivity was measured using the Barratt Impulsiveness Scale (BIS), and multiple linear regression analysis identified three significant predictors of higher impulsivity scores: perceived stress during school days ($\beta = 0.370$, $p < 0.001$), conflictual discussions with parents ($\beta = 0.273$, $p = 0.013$), and discomfort during academic-related conversations at home ($\beta = 0.331$, $p < 0.001$). The model demonstrated high explanatory power (adjusted $R^2 = 0.874$). These findings indicate that impulsivity in drama students is influenced by neurodevelopmental factors and environmental stressors, particularly family and school-related pressures. The results underscore the importance of targeted interventions, including stress management strategies and family communication support, to enhance self-control and emotional resilience in performing arts education contexts.

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1. Introduction

Adolescence is a critical period for emotional, cognitive, and social development, marked by propensity for impulsive behaviors and hindrance in self-regulation [1]. This is partly explained by the delayed development of the prefrontal dopaminergic system, which contributes to adolescents' difficulties in managing impulses and self-control, as well as their increased tendency to engage in risky behaviors [2]. These challenges are often associated with the asynchronous maturation of the limbic system and the prefrontal cortex [3,4]. While impulsivity has been widely studied in general adolescent populations, less attention has been given to students enrolled in performing arts education, especially those in drama programs as part of the compulsory curriculum. Adolescents studying dramatic arts exhibit specific psychological and behavioral traits shaped by the nature of their education, which requires sustained conscious awareness, authenticity in corporal and emotional expression, and spontaneity [5]. This background can amplify vulnerability to stress, emotional dysregulation, and impulse control difficulties [6,7]. Additionally, the performative context heightens these adolescents` sensitivity to evaluation from peers and audiences, contributing to performance anxiety and self-criticism [8]. On the other hand, the rehearsal hours and pressure to meet both academic and artistic challenges may further increase stress and consequently their

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impulsivity [9]. A review of the specialized literature has revealed that there are no studies identifying the predictive factors of impulsivity in adolescents studying drama as part of the compulsory curriculum. Recent studies focus on developing tools to optimize self-control for these adolescents, without thoroughly exploring the explanatory aspects of the predictive factors. [10] In this context, understanding the predictors of impulsivity among drama students is crucial for designing instruments to support their well-being and optimizing self-control and vocational performances as well. The present study employs a mixed-methods approach, combining qualitative focus groups with quantitative analyses, to explore how lifestyle factors, family dynamics, and school-related stress influence impulsivity in adolescents attending drama classes as a part of compulsory education. By developing a context-sensitive explanatory model, this research aims to inform targeted interventions to enhance self-control and emotional regulation within drama-based educational environments.

2. Materials and Methods

The research comprised two main stages, beginning with two focus groups conducted in October 2021. Focus groups were chosen for their interactive nature, allowing direct engagement between the researcher and participants, enabling follow-up questions to deepen understanding, and facilitating free expression of opinions and affective experiences related to the research topic [11]. The first group consisted of 12 eleventh-grade students (N=12) from the National College of Arts Dinu Lipatti, with a majority from urban areas (75%), balanced gender ratio (1:1.33 boys to girls), and varied family backgrounds (66.66% nuclear, 33.40% single-parent). The second group included 16 twelfth-grade students (N=16) from the same institution and profile, predominantly urban (87.5%), with a 1:1.67 boys to girls ratio, and similar family structure distribution. None of the participants had psychiatric diagnoses at the time of the study. Participation was voluntary, with informed consent obtained from adult students and parental consent for minors. Discussions, lasting 50–60 minutes, were moderated by a single facilitator in a school meeting room without teachers present. A semi-structured interview guide of 15 predetermined questions was used, exploring: self-control, impulse management, peer and family influences, and needs for optimization in vocational activities. Responses were recorded, transcribed, and qualitatively analyzed.

The second stage involved a larger sample of 90 students (45 girls, 45 boys) from the same institution. The participants were aged between 14 and 17 years. Of the total number of students, 84 came from urban areas (93.30%) and 6 from rural areas (6.70%). Regarding family structure, 62 participants (68.89%) were raised in nuclear families, 20 (22.22%) in single-parent families raised by their mothers, and 8 (8.88%) came from extended families. Participants completed the Barratt Impulsivity Scale [12] to establish baseline impulsivity scores. An anthropological questionnaire comprising 77 items was developed and refined through pilot testing on a similar group of 30 ninth-grade students to ensure clarity and relevance. This instrument assessed: lifestyle habits, social behavior in private and public contexts, self-image influences, and pandemic-related changes affecting impulsivity. Multiple linear regression analysis was conducted to identify the predictors of impulsivity among adolescents studying drama.

All materials, including questionnaires and transcripts, are available upon request to facilitate replication and further research.

3. Results

The following section presents the main findings derived from focus group discussions and the multiple linear regression analysis used to explore predictors of impulsivity.

3.1. Difficulties Encountered by Students in Stage Performance

Focus group discussions revealed significant differences between 11th and 12th-grade students regarding difficulties in stage acting, influenced by their experience in vocational subjects.

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3.1.1. Identification of Difficulties

Question 1: Do you experience any difficulties in performing on stage?

The majority of students responded affirmatively, listing various challenges in stage interpretation.

11th-grade students primarily emphasized poor emotional regulation and bodily control affecting overall expressivity. This was linked to a focus mainly on verbal delivery and facial expressions, which in turn led to issues with text memorization and identification with their roles.

12th-grade students, however, reported challenges related to performing without a physically present audience, which deprived them of real-time feedback necessary for motivating their performance. This lack of immediate audience interaction was perceived as a significant factor in decreased motivation and negatively impacted the quality of their dramatic acting.

Question 1: What are the difficulties you encounter?

Students reported a range of difficulties in stage performance, including challenges with emotional regulation, body control, memorization, and role identification. Additional issues were linked to the absence of a live audience, which negatively impacted motivation and overall performance quality.

11th-grade students emphasized difficulties related to managing emotions and body control, memorizing lines, and identifying with their roles.

12th-grade students reported challenges in performing without a live audience, which affected motivation and performance quality.

3.1.2. Perception and Manifestation of Self-Control

Students provided diverse perspectives on the concept of self-control and ways they apply it in daily life and on stage.

Question 2: What does good self-control mean?

Students articulated a range of interpretations that reveal both shared understandings and developmental progression across grade levels when asked to define the concept of self-control.

11th-grade students highlighted several aspects of self-control, including inhibition of immediate reactions, mastery over their responses, and the ability to resist temptations. Their focus was mainly on controlling impulses and regulating emotions in everyday contexts.

12th-grade students, in addition to these views, emphasized emotional regulation specifically in stage performances and the capacity for decision-making guided by self-control. Their responses reflected a more developed understanding of self-control as both emotional regulation and cognitive control during performance situations.

Overall, most students underscored the importance of self-control in inhibiting temptations and making regulated decisions.

3.1.3. Factors Influencing Loss of Self-Control

Students identified key causes leading to loss of self-control in everyday life and school environments: difficult communication with family, conflicts over smoking or exam preparation; difficulties in peer relationships at school, stress from assignments, and teachers' attitudes; communication barriers between genders.

Question 3: How do you cope when you feel you are losing self-control in interpersonal relationships?

In response to emotionally demanding interpersonal situations, students described a range of coping strategies that reflect both developmental differences and varying levels of emotional self-awareness.

*11th grade s*tudents predominantly exhibited intense emotional reactions, withdrawal to regain composure, or distraction techniques to inhibit impulsive behaviors.

12th grade students showed greater reflective capacity and deliberate emotion regulation strategies, while similar coping mechanisms are present.

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Question 4: How do you manage situations during specialty classes when you feel unable to control your reactions?

When describing how they reacted in emotionally challenging situations during specialty classes, students revealed distinct behavioral patterns shaped by their level of experience and emotional regulation skills.

11th grade students identified the most common reactions: freezing and forgetting lines, impulsive verbal reactions, or postponing responses while awaiting instructor intervention.

12th grade students, in addition to these behaviors, demonstrated the ability to disregard disruptions and maintain focus on their work, reflecting improved adaptability.

3.1.4. Causes of Low Self-Control on Stage

The adolescents identified the following factors: misunderstandings with teachers; indiscipline in following instructions; poor performance by some peers; forgetting lines; deficient emotional control and body expressivity.

Additional factors included low motivation, competing interests such as part-time jobs, poor communication skills, and lack of mutual respect.

Question 5: What are the reasons for losing self-control in daily life?

The question about the situations in which they tended to lose self-control in everyday life revealed that students from both grades identified a range of personal, familial, and school-related stressors. Their responses revealed distinct patterns of emotional vulnerability shaped by developmental stage and contextual factors.

11th grade students included familial conflicts (e.g., smoking, exam preparation), social challenges at school, and academic stress.

12th grade students stated similar stressors and heightened awareness of communication difficulties, gender-related relational challenges, and academic pressures.

3.1.5. Perceived Factors Favoring Decreased Self-Control

Students emphasized the following: lack of communication and mutual respect; low interest in artistic activities; personal problems such as pride; part-time jobs reducing time and energy for artistic engagement.

Question 6: What factors contribute to losing self-control during specialty classes or on stage?

Students identified multiple factors contributing to the loss of self-control during acting classes and stage performance, reflecting both interpersonal dynamics and individual emotional challenges.

11th grade students stated that factors include misunderstandings with teachers, lack of discipline in following instructions, poor peer performance, forgetting lines, and challenges in managing emotions and bodily expressivity.

12th grade students identified the additional factors which are low motivation for vocational activities, competing interests such as part-time jobs, poor communication skills, and lack of mutual respect among peers.

3.1.6. Importance and Usefulness of Self-Control

Most students considered self-control essential for personal development and stage performance.

More experienced students (12th grade) identified concrete management methods such as communication and reflection.

Question 8: Do you consider it important to have good self-control?

Students recognized the value of self-control in their personal growth and artistic performance, with responses reflecting varying levels of awareness and strategy based on experience.

11th grade students affirmed the importance of self-control for personal and artistic development.

12th grade students emphasized specific strategies for effective self-control, including clear communication, active participation, spontaneity, and reflective practices.

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Question 9: How would good self-control benefit you?

Most adolescent participants emphasized the utility of good self-control, identifying several areas that could be improved through its development: personal growth, enhanced ability to maintain self-control during stage performances, increased perseverance, and improved decision-making skills.

Both grade students identified benefits including enhanced personal development, improved stage performance, increased perseverance, and better decision-making abilities.

3.1.7. The Role of Family and Teachers in Shaping Self-Control

Most participants perceived parental models as negative, with exceptions where fathers, mothers, or grandmothers provided positive examples.

Students affirmed parents should respond to difficult situations with calmness, active listening, empathy, assertiveness, and control of impulsive reactions.

Question 10: Do you perceive your parents as good role models for managing impulsive reactions in difficult situations?

Both grade students reported negative parental role models, with some exceptions noting positive examples from fathers, mothers, or grandmothers.

Question 11: How do you think parents should respond in challenging situations to serve as positive role models?

Both grade students suggested that parents should demonstrate calmness, active listening, empathy, assertiveness, thoughtful responses, and inhibition of impulsive reactions.

School self-control models were generally appreciated, with expectations from teachers including active listening, effective communication, calmness, and fairness.

Question 12: Are there models of self-control among your schoolteachers?

Both grade students perceived their teachers as positive examples of self-control, although isolated dissenting opinions exist.

Question 13: How should teachers behave in difficult situations to be effective role models?

Both grade students desired teacher behaviors include active listening, focusing on resolving issues rather than assigning blame, effective communication, calm demeanor, openness to differing opinions, and fairness in evaluation.

3.1.8. Need for a Digital Tool to Optimize Self-Control

The majority of students considered the existence of an application for self-control education useful, preferably with visually attractive games, free access, and multiplatform availability.

However, some opinions emphasized personal effort over digital programs**.**

Question 14: Would a digital tool designed to help optimize self-control be useful?

Both grade students expressed the need for such a tool, emphasizing features like accessibility, engaging content, and free availability. A minority prefer personal effort over technological solutions.

Question 15: What characteristics should such a digital tool have to effectively engage and assist you in improving self-control?

Both grade students recommended the inclusion of interactive games, visually appealing design and color schemes, free access, and multi-platform compatibility.

3.2. Explanatory Model of Impulsivity Based on Multiple Linear Regression

To explore the predictors of impulsivity, a multiple linear regression analysis was conducted using 77 anthropological questionnaire items assessing variables such as sleep patterns, nutrition, parental relationships, and school stress. Most of the items were rated on a Likert scale. The dependent variable was impulsivity level, measured by the Barratt Impulsiveness Scale.

Of the 77 items, 48 met the statistical validity criteria, including absence of multicollinearity (assessed via Variance Inflation Factor), homoscedasticity, normality, linearity, and residual independence.

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The overall regression model was statistically significant, $F(48, 36) = 13.166$, $p < 0.001$, explaining 94.6% of the variance in Barratt Impulsiveness Scale scores ($R = 0.973$, $R^2 = 0.946$, adjusted $R^2 = 0.874$). The standard error of the estimate was 1.272, indicating a strong model fit. The Durbin–Watson statistic was 1.759, suggesting no significant autocorrelation of residuals. (Table 1).

Table 1. Summary Statistics for the Multiple Linear Regression Model.

Statistics	Value
R	.973
R^2	.946
Adjusted R^2	.874
Standard Error of Estimate	1.272
F-statistic	13.166
Degrees of Freedom (1, 2)	(48,36)
p-value (Sig.)	< .001
Durbin–Watson	1.759

Significant predictors of impulsivity included: conflicts with parents, discussions about school assignments with parents and school day stress (Table 2).

Table 2. Significant Predictors of Impulsivity from Multiple Linear Regression Analysis.

Predictor	Beta	SE	t	p
Conflicts with parents	.273	.10	2.50	.013
Discussions about school assignments with parents	.331	.09	3.68	<.001
School day stress	.370	.08	4.62	<.001

4. Discussion

4.1. Summary of Key Findings

This study explored the factors associated with impulsivity identified by adolescents studying drama and investigated psychological predictors of impulsivity through a mixed-method approach combining qualitative focus groups and quantitative multiple linear regression analysis. The focus groups highlighted emotional, relational, and contextual challenges affecting self-control, including family conflicts, school-related stress, and communication barriers. Correspondingly, the regression model identified parental conflicts, discussions about school assignments with parents, and school day stress as significant predictors of impulsivity.

4.2. Integration and Interpretation of Qualitative and Quantitative Findings

The qualitative and quantitative results converge, providing a multifaceted understanding of adolescent impulsivity and self-control. The students' narratives of emotional dysregulation and stress triggered by parental conflict and academic pressures align closely with the regression findings, where these variables significantly predicted impulsivity levels ($\beta = 0.273$ for parental conflicts, $\beta = 0.331$ for discussions about school assignments, and $\beta = 0.370$ for school day stress).

This consistency highlights that impulsivity in adolescence is not merely a trait-like characteristic but is significantly shaped by environmental and relational contexts. The difficulty students expressed in communicating with parents about academic and vocational matters confirms

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the important role of family dynamics, which is reflected in the statistical evidence demonstrating that such communication challenges contribute to impulsive behaviors.

4.3. Relation to Existing Literature and Theoretical Frameworks

Our findings align well with established behavioral genetic and developmental theories of adolescent impulsivity. Moffitt [13] emphasized that both genetic predispositions and environmental factors, such as family dynamics and stress, interact to influence antisocial and impulsive behaviors. In this regard, our results support the environmental influence, demonstrating that family conflicts and school stress are important contributors to impulsivity during adolescence.

Furthermore, Moffitt et al. [14] identified childhood self-control as a powerful predictor of various life outcomes, including health, socioeconomic status, and public safety. Adolescents in our study acknowledged self-control as an important resource for their personal, academic and vocational success. In addition, the regression model predictors reinforce the importance of interpersonal and contextual factors in shaping impulsivity, which is consistent with this theoretical perspective.

From a neurodevelopmental viewpoint, Steinberg and Chein [15] proposed models explaining adolescent risk-taking and impulsivity as resulting from an imbalance between heightened reward sensitivity and still-maturing cognitive control systems. Our study supports this view by showing how external stressors—such as family conflicts and academic pressures—may exacerbate impulsive tendencies when cognitive control is still developing, underlining the interaction between neurobiological maturation and environmental context.

Moreover, the role of parent-adolescent communication is critical, as highlighted in the comparative review by Wang, Esteinou, and Xia [16], who emphasize that effective communication supports adolescent autonomy and emotional regulation across cultures. The communication barriers and conflicts reported by students regarding parental involvement in school tasks corroborate this, suggesting that culturally sensitive interventions to enhance family dialogue may be vital to improving adolescents' self-control and reducing impulsivity.

4.4. Practical and Educational Implications

The integration of qualitative and quantitative data underlines the necessity of comprehensive interventions addressing both individual psychological skills and environmental factors. Educational programs should incorporate stress management and emotional regulation techniques, while family-based approaches should aim to improve parent-adolescent communication and conflict resolution.

Students who participated in the study expressed interest in digital tools for self-control education points toward the potential utility of gamified, accessible, and culturally adaptable applications that engage adolescents actively in building their regulatory skills.

4.5. Limitations and Directions for Future Research

Despite the strengths of the study, limitations include the use of a sample with particular traits, specifically performing drama, which may limit the generalizability of the findings. Future research should extend to adolescent studying diverse profile education and employ longitudinal designs to explore developmental trajectories of impulsivity and self-control.

Additionally, integrating biological, neuropsychological, and cultural measures would deepen understanding how genetic, neurodevelopmental, and environmental factors jointly shape impulsivity. Investigating the effectiveness of family-based and digital interventions in diverse cultural contexts would also be valuable.

5. Conclusions

This study provides novel insights into the complex interplay between family dynamics, academic and vocational stress, and adolescent impulsivity. Through a mixed-methods approach, we

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demonstrated that parental conflicts, challenges in parent-adolescent communication about schoolwork, and school day stress are significant predictors of impulsivity, corroborated by adolescents' own experiences.

Our findings reinforce established theoretical models emphasizing the combined influence of neurodevelopmental processes and environmental factors on self-control during adolescence. Practical implications highlight the importance of integrated interventions targeting family communication, emotional regulation, and stress management, potentially supported by innovative digital tools.

Future research should extend the scope to diverse adolescent samples and incorporate longitudinal and biological measures to further unravel the mechanisms underlying adolescent impulsivity and self-control. Ultimately, fostering supportive environments both at home and school remains essential to promote healthier adolescent development.

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