Identity Styles and High-Risk Behaviors in Adolescence: Evolution from Early to Late Stages

Shahin. Imani Khoshkhoo[1] , Sajjad. Rezaei[2]* , Abbas Ali. Hosseinkhanzadeh[3]

[1] MA in General Psychology, Department of Psychology, University of Guilan, Rasht, Iran
[2] Associate Professor, Department of Psychology, University of Guilan, Rasht, Iran
[3] Full Professor, Department of Psychology, University of Guilan, Rasht, Iran

* Corresponding author email address: Rezaei_psy@hotmail.com

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ABSTRACT

Objective: Adolescence involves rapid physical, psychological, and social changes that can increase engagement in high-risk behaviors. Investigating the role of identity styles in these behaviors may aid in developing effective prevention and intervention strategies for adolescents.

Methods and Materials: This cross-sectional study examined male middle and high school students in Siahkal County, Iran, during the 2023-2024 academic year. The sample included 435 students aged 11 to 19, divided equally across three groups representing early, middle, and late adolescence. Data were collected via surveys using Berzonsky's Identity Style Inventory (1989) and the Iranian Adolescent Risk-Taking Scale (2011). Statistical analyses included Pearson correlation, multiple linear regression, and Fisher's Z-test.

Findings: Distinct patterns emerged between identity styles and high-risk behaviors across adolescence. The normative identity style was consistently associated with reduced high-risk behaviors, with the strongest protective effects observed during late adolescence ($p < 0.01$). The diffuse-avoidant identity style correlated with increased engagement in high-risk behaviors across all stages of adolescence ($p < 0.01$), particularly in late adolescence, where a pronounced tendency toward opposite-sex interactions was observed ($z > 1.96$). The informational identity style demonstrated a significant protective role, especially in late adolescence ($p < 0.01$), effectively reducing tendencies toward alcohol use.

Conclusion: These findings indicate that distinct identity styles have significant and varying associations with high-risk behaviors throughout adolescence. The results support the design of targeted and predictive interventions and support programs tailored to each identity style and developmental stage to reduce high-risk behaviors.

Keywords: *adolescence, developmental stages, high-risk behaviors, identity styles*

1. Introduction

Adolescence, spanning approximately ages 10 to 19, represents a critical developmental period marked by rapid biological, cognitive, and psychosocial changes (World Health, 2020). Initiated by puberty, these changes significantly impact brain regions associated with impulse control, decision-making, and risk assessment (Larsen & Luna, 2018). Coupled with heightened emotional sensitivity and identity exploration, adolescence becomes a dual-edged phase of opportunity and vulnerability, where developmental potential coexists with susceptibility to risk factors (Esnaola et al., 2020). Understanding these dynamics is essential for promoting positive developmental outcomes and mitigating potential risks.

Adolescence can be categorized into three stages—early (10–13 years), middle (14–16 years), and late (17–19 years)—each characterized by distinct developmental milestones (Barrett, 1996). Early adolescence is dominated by physical growth, self-awareness, and reliance on peer relationships (Brinegar & Caskey, 2022). Middle adolescence sees intensified identity exploration, a growing need for autonomy, and increased engagement in risk-taking behaviors (Zhang & Li, 2022). By late adolescence, cognitive maturation fosters improved impulse control and long-term planning, enabling more stable social relationships and independent decision-making (Branje et al., 2021). These developmental stages provide an essential framework for understanding the emergence and trajectory of high-risk behaviors.

High-risk behaviors—actions that may harm physical, social, or psychological well-being—commonly emerge during adolescence (DiClemente et al., 2013). These behaviors include substance use, unsafe sexual practices, reckless driving, delinquency, and psychological risks like self-harm and severe depression (Steinberg, 2008). Research demonstrates a developmental trajectory, with these behaviors being rare in early adolescence, peaking in middle adolescence, and either persisting or declining in late adolescence (Miech et al., 2023). For example, over 85% of adult smokers report initiating smoking during adolescence, emphasizing the long-term implications of adolescent risk behaviors (Peeters et al., 2019).

The emergence of high-risk behaviors is shaped by neurobiological, social, and environmental factors. Neurodevelopmental changes during adolescence, such as heightened sensitivity to rewards and underdeveloped cognitive control, increase susceptibility to impulsive behaviors (Crowley et al., 2015; Ross et al., 2016). Social influences, including peer pressure and family dynamics, further amplify these risks (Tabrizi et al., 2024). Among these factors, identity development stands out as a critical psychological process, shaping adolescents' decision-making and behavioral patterns (Zabihi et al., 2019).

Identity formation, a core developmental task of adolescence, involves consolidating personal and social identities that guide self-concept and future choices (Ingersgaard et al., 2024). Erikson (1968) described adolescence as a stage of "identity versus role confusion," where successfully resolving this crisis fosters a cohesive sense of self (Erikson, 1968). Building on Erikson's work, Berzonsky (1989) proposed a socio-cognitive model that categorizes identity processing into informational, normative, and diffuse/avoidant styles (Berzonsky, 1989). Adolescents with an informational style actively seek and critically evaluate new information, exhibiting adaptability and openness to change (Czyżowska, 2022). Normative individuals align closely with established values and societal expectations, maintaining stability and resistance to (Bosch & Card, 2012). Conversely, those with a diffuse/avoidant style delay identity-related decisions, often resulting in fragmented self-concepts and increased vulnerability to high-risk behaviors (Berzonsky & Ferrari, 2009).

Empirical studies provide evidence for the link between identity styles and high-risk behaviors, with findings varying across cultural and demographic contexts. Adolescents with informational and normative identity styles are generally associated with fewer high-risk behaviors, driven by self-regulation and adherence to values (Zabihi et al., 2019). Meanwhile, those with a diffuse/avoidant style are more likely to engage in risk behaviors such as substance use, delinquency, and unsafe sexual practices (Choobforoushzadeh et al., 2024). For instance, research in collectivist societies highlights the protective roles of normative and informational styles due to the emphasis on social conformity and value-driven behavior (Afridi & Rahim, 2020). In contrast, studies in the United States, such as Brunch (2023) and Berzonsky & Kuk (2022), emphasize the impact of identity confusion on increased risk behaviors and the role of identity styles in adjusting to new environments (Berzonsky & Kuk, 2022; Branch, 2023). These findings underscore the necessity of a culturally informed and context-specific approach to understanding adolescent identity and behavior.

Despite substantial research, a critical yet underexplored gap remains in understanding how the relationship between

identity styles and high-risk behaviors evolves across the stages of adolescence. Most studies treat adolescence as a homogenous phase, overlooking developmental differences between early, middle, and late adolescence. This approach neglects important nuances, such as shifts in identity formation, autonomy, and risk propensity, which influence behavioral outcomes. Investigating these transitions is essential to identify critical periods for targeted interventions.

This study addresses this gap by exploring how identity styles influence high-risk behaviors across early, middle, and late adolescence. By integrating developmental and contextual perspectives, the research aims to offer a nuanced understanding of the interplay between identity and behavior, providing actionable insights for phase-specific interventions that promote healthier developmental trajectories.

2. Methods and Materials

2.1. Study Design and Participants

This study was cross-sectional analytical research that examined the relationship between identity styles and high-risk behaviors across the developmental stages of adolescence, as defined by Barrett (1996): early adolescence (11–13 years), middle adolescence (14–16 years), and late adolescence (17–19 years) (Barrett, 1996).

The study population comprised male adolescents aged 12 to 18 years who were enrolled in middle and high schools in Siahkal County during the 2023–2024 academic year. A two-stage cluster sampling method was employed to ensure representative coverage, with participants distributed equally across three developmental stages: early adolescence (12–14 years, n = 145), middle adolescence (15–16 years, n = 145), and late adolescence (17–18 years, n = 145). The total sample size consisted of 435 participants.

Eligibility criteria included a willingness to participate, good physical health, and behavioral stability with no significant psychological concerns. Adolescents were excluded if they withdrew consent, submitted incomplete questionnaire responses, or had a history of hospitalization for severe psychiatric or physical illnesses within the past year.

This study targeted adolescents in three age groups (11–13 years, 14–16 years, and 17–19 years). After obtaining permissions from the University of Guilan and the Department of Education in Siahkal County, the research was conducted systematically to ensure accurate and reliable data collection.

Data collection began with school visits, during which the research objectives were explained to school principals, and their permission was obtained. A list of classes was then prepared, and selected classes were approached after securing consent from the teachers. Paper-based, anonymous questionnaires were distributed to the students, ensuring participants' privacy by not collecting names.

Before completing the questionnaires, participants were provided with a detailed explanation of the study's purpose and significance. They were assured that their responses would remain confidential and were encouraged to answer all questions thoughtfully and thoroughly.

In total, 602 questionnaires were collected. After applying exclusion criteria, 167 questionnaires were removed, resulting in 435 validated responses for analysis. Data were then entered into SPSS24 software, where appropriate statistical methods were applied to address the research objectives effectively.

2.2. Measures

The Iranian Adolescent Risk-Taking Scale (IARS), developed by Zadeh-Mohammadi et al. (2011), is a rigorously designed self-report questionnaire tailored to assess risky behaviors among Iranian adolescents, addressing the unique sociocultural context of Iran while drawing on international measures like the Adolescent Risk Questionnaire (ARQ) and the Youth Risk Behavior Survey (YRBS) (Zadeh Mohammadi et al., 2024). The 38-item scale evaluates seven dimensions—substance use, alcohol use, Cigarette use, violence, sexual behaviors, relationships with the opposite sex, and risky driving—using a 5-point Likert scale, with higher scores reflecting greater risk-taking. Psychometric properties are robust: exploratory factor analysis (KMO = 0.95, content validity = 0.86) confirms construct validity, and the scale demonstrates high internal consistency reliability (Cronbach's alpha = 0.93 overall, with subscales ranging from 0.76 to 0.91). Reliability findings align with prior studies (e.g., (Choobforoushzadeh et al., 2024; Zadeh Mohammadi et al., 2024)), ensuring replicability and consistency. Cultural adaptation was validated through expert reviews and pilot testing, enhancing ecological validity while mitigating potential cultural response biases. Despite reliance on self-reports, efforts to minimize bias—such as ensuring anonymity and emphasizing honest responses—further strengthen the tool's

reliability. Compared to international measures, the IARS's emphasis on culturally specific constructs provides superior contextual relevance for Iranian adolescents, making it a gold standard for assessing high-risk behaviors in this population.

The Identity Styles Inventory (ISI-6G), developed by Berzonsky (1989) and revised in 1992, is a validated self-report questionnaire designed to assess cognitive and social processes related to identity formation in adolescents (Berzonsky, 1989). It comprises 40 items across three primary subscales—informational identity style (11 items), normative identity style (9 items), and diffuse/avoidant identity style (10 items)—and a commitment scale (10 items), which was excluded in this study to focus on the core identity styles. Respondents rate items on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher subscale scores indicating stronger preferences for the corresponding identity style. Reverse-scored items (e.g., 9, 11, 14, and 20) are included to mitigate response bias. The ISI-6G has demonstrated strong validity, with correlations to Bennion and Adams's (1986) Identity Status Inventory, and aligns with theoretical constructs such as identity achievement and diffusion. Reliability metrics from Berzonsky's studies report test-retest values ranging from 0.83 to 0.89 and Cronbach's alpha coefficients of 0.64 to 0.76. Recent findings by Gravand (2023) showed improved Cronbach's alpha values for informational (0.85), normative (0.84), diffuse/avoidant (0.80), and commitment (0.89)

subscales (Garavand, 2023). In this study, Cronbach's alpha coefficients of 0.81, 0.77, and 0.73 for informational, normative, and diffuse/avoidant identity styles confirm the ISI-6G's reliability and relevance as a robust tool for exploring identity processes in adolescents.

2.3. Data Analysis

The relationship between identity styles and high-risk behaviors at each stage of adolescence was examined using Pearson's correlation analysis. To assess the differences in the strength of these relationships across the three stages of adolescence (early, middle, and late), Fisher's Z-test for comparing correlation coefficients was employed. Furthermore, to illustrate the strength and direction of these associations across developmental stages, regression slopes derived from multiple linear regression analyses were computed and graphically represented. All statistical analyses were conducted using SPSS (version 26, IBM Corp., Armonk, NY), ensuring methodological rigor and precision.

3. Findings and Results

The descriptive statistics for participants across the stages of adolescence are summarized in Table 1, detailing the mean and standard deviation for key variables under investigation.

Table 1

Descriptive Statistics of Identity Styles and High-Risk Behaviors Across Adolescence Stages

Variable	Early adolescents (M, SD)	Middle adolescents (M, SD)	Late adolescents (M, SD)
Informational style	38.20 (6.65)	39.68 (5.79)	40.11 (5.64)
Normative style	31.74 (5.64)	31.89 (4.95)	30.42 (4.90)
Diffused-avoidant style	28.18 (5.71)	28.84 (5.19)	28.11 (5.77)
Substance use	12.00 (5.39)	13.16 (6.01)	14.88 (7.34)
Alcohol use	11.09 (5.77)	13.60 (6.63)	15.41 (7.79)
Cigarette use	7.48 (4.10)	8.18 (4.56)	10.15 (6.31)
Violence	13.26 (5.34)	13.81 (4.84)	13.74 (5.12)
Sexual behaviors	9.76 (4.71)	10.50 (4.67)	12.07 (4.52)
Opposite-sex relationships	11.48 (4.89)	12.95 (4.60)	13.67 (4.50)
Risky driving	17.26 (6.84)	18.22 (6.07)	17.11 (6.48)
Total risk behaviors score	82.18 (26.58)	89.58 (27.70)	96.99 (33.42)

Note. M = Mean, SD = Standard Deviation.

The results reveal distinct trends in identity styles and high-risk behaviors during adolescence. The informational identity style demonstrated a steady increase across the developmental stages, whereas the normative identity style declined slightly during late adolescence. In contrast, the diffuse-avoidant style remained relatively stable throughout adolescence. Among the high-risk behaviors, substance use and alcohol use increased with age, while violence exhibited minimal fluctuation. Risky driving peaked in middle adolescence before declining slightly in late adolescence. Importantly, the total risk behavior scores increased consistently from early to late adolescence, reflecting an overall rise in adolescents' engagement with high-risk behaviors over time. Table 2 outlines the relationships between identity styles and high-risk behaviors in early to late stages of adolescence.

Table 2

Correlations Between Identity Styles and High-Risk Behaviors in Early, Middle and Late Stages of Adolescence

Stages			1	2	3	4	5	6	7	8	9	10	11
Early	1.	Informational style	-										
	2.	Normative style	.45**	-									
	3.	Diffused-avoidant style	.12	.28**	-								
	4.	Substance use	-.18*	-.11	.1	-							
	5.	Alcohol use	-.16	-.16	.17*	.66**	-						
	6.	Cigarette use	-.09	-.12	.25**	.56**	.59**	-					
	7.	Violence	-.12	-.19*	.24**	.38**	.50**	.32**	-				
	8.	Sexual behaviors	.06	-.1	.21*	.36**	.37**	.37**	.44**	-			
	9.	Opposite-sex relationships	.07	-.01	.22**	.39**	.49**	.46**	.41**	.67**	-		
	10.	Risky driving	-.22**	-.18*	.21*	.22**	.33**	.27**	.57**	.41**	.30**	-	
	11.	Total risk behaviors score	-.14	-.18*	.28**	.70**	.78**	.69**	.73**	.71**	.72**	.66**	-
Middle	1.	Informational style	-										
	2.	Normative style	.42**	-									
	3.	Diffused-avoidant style	-.06	.01	-								
	4.	Substance use	-.01	-.06	.26**	-							
	5.	Alcohol use	.01	-.1	.23**	.58**	-						
	6.	Cigarette use	-.11	-.17*	.26**	.62**	.47**	-					
	7.	Violence	-.22**	-.14	.26**	.30**	.47**	.34**	-				
	8.	Sexual behaviors	-.12	-.22**	.18*	.36**	.45**	.22**	.45**	-			
	9.	Opposite-sex relationships	-.14	-.1	.22**	.45**	.61**	.38**	.47**	.55**	-		
	10.	Risky driving	-.15	-.1	.37**	.28**	.41**	.28**	.58**	.44**	.44**	-	
	11.	Total risk behaviors score	-.13	-.17*	.37**	.72**	.81**	.65**	.71**	.67**	.75**	.69**	-
Late	1.	Informational style	-										
	2.	Normative style	.50**	-									
	3.	Diffused-avoidant style	-.28**	-.19*	-								
	4.	Substance use	-.16*	-.25**	.17*	-							
	5.	Alcohol use	-.25**	-.34**	.34**	.69**	-						
	6.	Cigarette use	-.19*	-.29**	.20*	.69**	.70**	-					
	7.	Violence	-.20*	-.33**	.28**	.49**	.63**	.41**	-				
	8.	Sexual behaviors	-.16*	-.33**	.38**	.56**	.62**	.44**	.51**	-			
	9.	Opposite-sex relationships	-.07	-.29**	.43**	.47**	.61**	.43**	.57**	.61**	-		
	10.	Risky driving	-.20*	-.22**	.37**	.50**	.62**	.50**	.59**	.46**	.53**	-	
	11.	Total risk behaviors score	-.23**	-.37**	.38**	.82**	.90**	.78**	.75**	.74**	.73**	.77**	-

Note. * p < .05; **p < .01

During the early stage, the informational identity style was negatively correlated with substance use and risky driving but was not significantly associated with the total high-risk behavior score. The normative identity style showed negative correlations with the total high-risk behavior score, violence, and risky driving. Conversely, the diffuse-avoidant identity style exhibited strong positive correlations with the total high-risk behavior score and several specific behaviors, including alcohol use, cigarette use, violence, sexual behaviors, opposite-sex relationships, and risky driving. In middle stage, the informational identity style showed no significant correlation with the total high-risk behavior score but demonstrated a significant negative relationship with aggression. The normative identity style was negatively correlated with the total score and showed significant negative associations with cigarette use and sexual behaviors. In contrast, the diffuse-avoidant identity style was positively correlated with the total high-risk behavior score and all specific high-risk behaviors,

demonstrating consistent links to increased risky behaviors. In late adolescence stage, the informational identity style showed a significant negative correlation with the total high-risk behavior score and all specific behaviors, except for opposite-sex relationships. Similarly, the normative identity style exhibited significant negative associations with the total high-risk behavior score and all individual risky behaviors. The diffuse-avoidant identity style, however, was positively correlated with the total high-risk behavior score and all individual risky behaviors, with the strength of these correlations peaking during late adolescence.

To compare the strength of the relationship between identity styles and risky behaviors across different stages of adolescence (early, middle, and late), Fisher's Z transformation coefficients were used. The differences in these relationships were compared separately between each pair of groups. In the case of a two-tailed test with a 95% confidence level, a z value greater than 1.96 is considered statistically significant (Table-3).

Table 3

Fisher's Z Coefficient Comparisons of Identity Styles and High-Risk Behaviors Across Adolescence Stages

Identity style	Adolescence stage comparison	Substance use	Alcohol use	Cigarette use	Aggression	Sexual behavior	Opposite-sex relationships	Risky driving	Total risky behavior score
Informational	Early vs. Mid	-1.52	-1.39	-.21	.84	1.57	1.80	-.63	-.03
	Early vs. Late	-.18	.84	.89	-.66	1.94	1.18	-.19	.84
	Mid vs. Late	1.34	2.23*	.68	-.19	.37	-.62	.43	-.86
Normative	Early vs. Mid	-.49	-.52	.43	-.46	.01	.79	-.65	-.08
	Early vs. Late	1.15	1.68	1.48	1.23	2.04*	2.44*	.33	1.69
	Mid vs. Late	1.64	2.20*	1.05	1.69	1.02	1.65	.98	1.77
Diffuse-Avoidant	Early vs. Mid	-.52	-.59	-.11	-.18	.25	.01	-1.47	-.81
	Early vs. Late	-.57	-1.60	.36	-.41	-1.53	-2.00*	-1.51	-.92
	Mid vs. Late	.79	-1.01	-.47	-.23	1.77	2.01*	-.04	-.11

Note. * z > 1.96

The findings highlight significant changes in these relationships over time. During late adolescence, the informational identity style was notably associated with lower levels of alcohol use compared to middle adolescence (Figure 1). Similarly, the normative identity style in late adolescence showed a more pronounced association with

reduced alcohol use (Figure 2), opposite-sex relationships (Figure 3), and sexual behaviors (Figure 4) compared to earlier stages. Furthermore, the diffuse-avoidant identity style exhibited a more pronounced relationship with opposite-sex relationships in late adolescence than in early or middle adolescence (Figure 5).

Figure 1

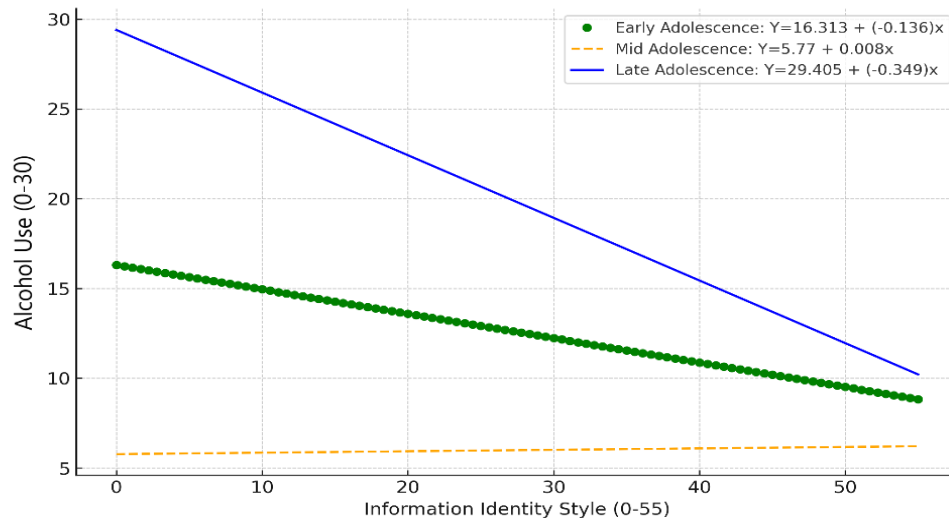*Regression slope of information identity style and alcohol use across adolescence*

Figure 2

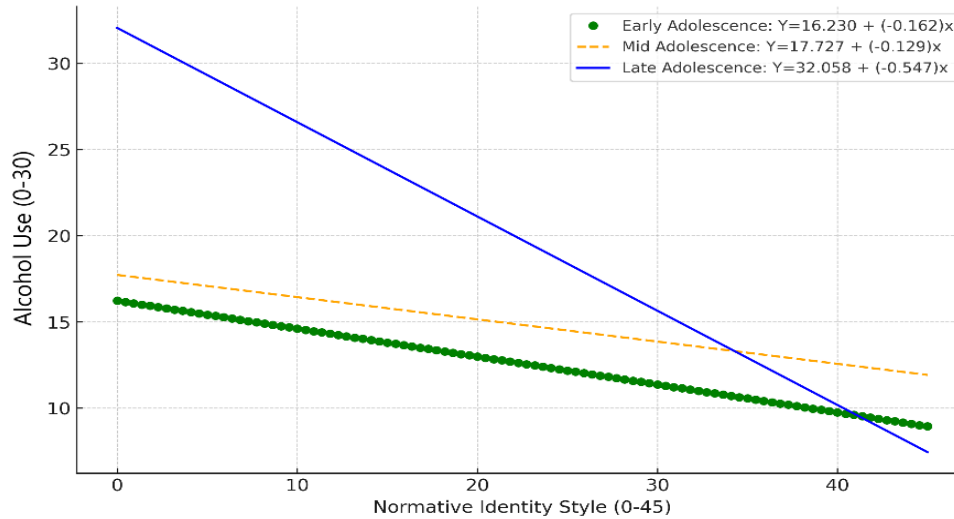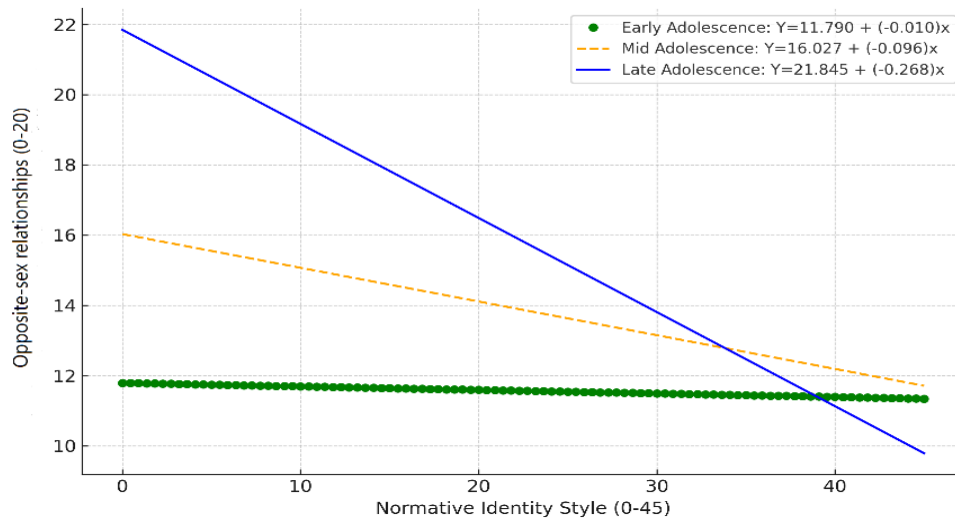*Regression slope of normative identity style and alcohol use across adolescence*

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Figure 3

Regression slope of normative identity style and opposite-sex relationships across adolescence

Figure 4

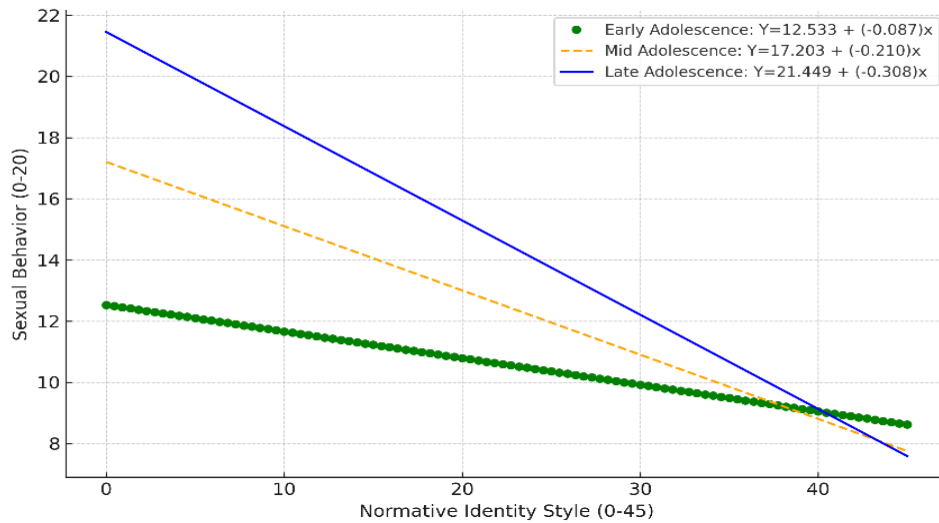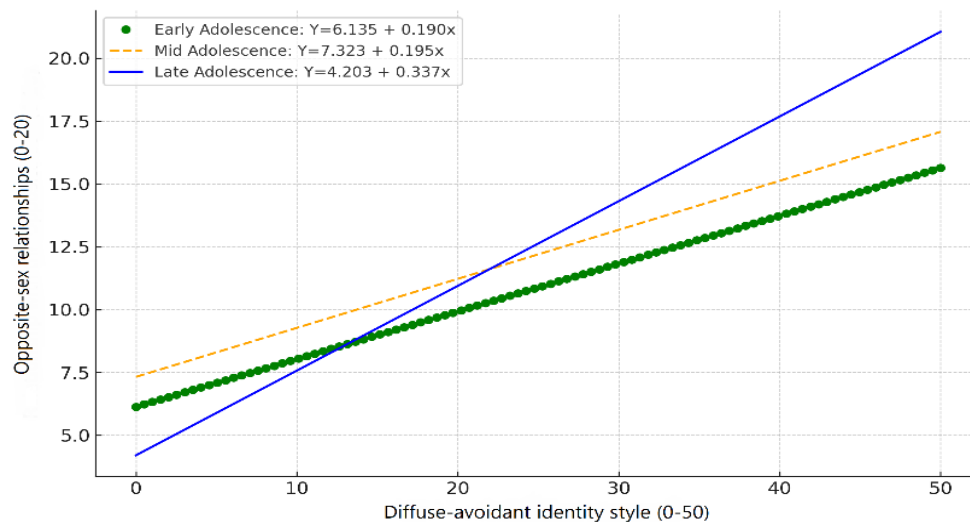*Regression slope of normative identity style and sexual behavior across adolescence*

Figure 5

Regression slope of diffuse-avoidant identity style and opposite-sex relationships across adolescence

4.   Discussion and Conclusion

This study investigated the relationship between identity styles and high-risk behaviors among adolescents, emphasizing their evolution across early, middle, and late adolescence. The findings underscore the pivotal role of identity styles in influencing engagement in risky behaviors, with notable variations across different developmental stages.

The results revealed distinct behavioral patterns associated with each identity style. Adolescents with a diffuse-avoidant identity style exhibited a consistent tendency toward high-risk behaviors across all stages of adolescence. Conversely, normative and informational identity styles functioned as protective factors, though their effectiveness varied by developmental stage. These findings align with prior research highlighting the significance of identity stability and commitment in shaping adolescents' behavioral choices (Afridi & Rahim, 2020; Berzonsky & Kuk, 2022; Branch, 2023; Choobforoushzadeh et al., 2024; Zabihi et al., 2019).

In early adolescence (ages 11–13), the normative identity style was negatively correlated with violent behaviors and reckless driving, illustrating the stabilizing influence of societal norms. This aligns with studies demonstrating the importance of early social values in moderating peer-driven behaviors during this developmental phase (Ciranka & Van den Bos, 2019; Mitic et al., 2021). The diffuse-avoidant

identity style, while associated with higher overall engagement in risky behaviors, exerted a limited influence on substance use—likely due to societal deterrents and adolescents' heightened risk awareness (Hautala & Sittner, 2019). The protective impact of the informational identity style was limited to substance use and reckless driving, reflecting cognitive immaturity in early adolescents (McCormick et al., 2020).

During middle adolescence (ages 14–16), the normative identity style shifted its protective role to behaviors such as smoking and sexual activities, reflecting the stabilizing influence of internalized values amid increased autonomy and peer pressure. In contrast, the diffuse-avoidant style was linked to a broader spectrum of high-risk behaviors, including substance use, possibly driven by heightened reward sensitivity during this period (Telzer et al., 2021). The informational identity style remained relatively less effective but showed a notable protective influence against violent behaviors, likely due to adolescents' ability to recognize the immediate consequences of such actions (Reingle et al., 2013).

In late adolescence (ages 17–19), the protective effects of the normative identity style extended to all high-risk behaviors, reflecting the culmination of identity stabilization and stronger adherence to cultural norms (Crocetti, 2017). Conversely, the diffuse-avoidant style was robustly associated with high-risk behaviors, emphasizing the adverse effects of identity instability in this stage (Bogaerts et al., 2023). The informational identity style demonstrated

enhanced protective effects, likely due to cognitive maturation and improved decision-making skills (Christakou et al., 2013). However, its limited influence on behaviors such as opposite-sex relationships suggests that these actions may be driven by social and emotional factors rather than analytical reasoning (Hegde et al., 2022).

The progression of adolescence reveals significant shifts in the intensity and nature of the relationship between identity styles and risky behaviors. In late adolescence, normative identity styles are particularly effective in reducing risky behaviors, including substance use, opposite-sex relationships, and sexual behaviors, likely due to the stabilization of identity and diminishing peer influence (Branje et al., 2021). Similarly, the protective effects of the informational identity style against alcohol consumption become more pronounced during this stage, reflecting the maturation of personal identity and decision-making processes. On the other hand, adolescents with a diffuse-avoidant identity style display increased engagement in opposite-sex relationships, potentially driven by unresolved identity issues, peer pressure, and a search for validation (Rizki & Keliat, 2021).

These findings emphasize the importance of integrating identity styles into interventions aimed at reducing risky behaviors in adolescents. Early adolescence interventions should prioritize reinforcing normative identity styles through the promotion of social norms and values. In middle adolescence, programs should focus on mitigating the risks associated with diffuse-avoidant identity styles by fostering identity commitment and resilience against peer influence. For late adolescence, interventions should harness the protective potential of normative and informational identity styles, emphasizing informed decision-making and value-based guidance. Policymakers and health professionals can use these insights to predict and mitigate risky behaviors, particularly during critical developmental transitions.

5. Limitations & Suggestions

This study excluded adolescents aged 11 and 19, which may limit the generalizability of the findings. Additionally, the sample was restricted to male students in Siahkal, potentially limiting the applicability of results to other regions or female adolescents. The cross-sectional design also limits insights into longitudinal changes and causal relationships, as well as the potential influence of environmental and historical factors.

Future studies should include larger, more diverse samples from urban and rural areas to enhance generalizability. Research should also investigate gender differences in the relationship between identity styles and risky behaviors. Longitudinal designs are recommended to track developmental changes in identity styles and risky behaviors over time. Furthermore, future studies could explore the role of cultural and social factors—such as family dynamics, peer relationships, and socioeconomic status—in shaping these relationships. Comparative analyses across cultural groups may yield deeper insights into the interplay between identity styles and high-risk behaviors.

Acknowledgments

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. The study received ethical approval from the Research Ethics Committee of the University of Guilan (Ethics Code: IR.GUILAN.REC.1403.100).

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 to this article.

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