

## RELATIONSHIP BETWEEN PEER GROUP INFLUENCE, PSYCHOLOGICAL DISTRESS, AND PSYCHOLOGICAL WELL-BEING AMONG ADDICTED ADOLESCENTS

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### ABSTRACT

The present study aimed to examine the relationship between peer group influence, psychological distress, psychological well-being, and substance addiction among adolescents. Additionally, the study investigated the moderating role of psychological well-being in the relationship between peer group influence and substance addiction. A cross-sectional research design was employed, and data were collected from 200 male adolescents aged 15–19 years admitted to drug addiction treatment centres in District Haripur, Khyber Pakhtunkhwa, Pakistan. Standardized measures assessing peer group influence, psychological distress, psychological well-being, and substance addiction were administered. Data were analysed using descriptive statistics, Pearson product-moment correlation, and moderation analysis through PROCESS Macro (Model 1). The results indicated that peer group influence was significantly and positively associated with substance addiction ( $r = .45, p < .001$ ) and psychological distress ( $r = .38, p < .001$ ). Psychological distress was also positively related to substance addiction ( $r = .52, p < .001$ ), whereas psychological well-being was negatively associated with substance addiction ( $r = -.41, p < .001$ ). Moderation analysis revealed a significant interaction effect between peer group influence and psychological well-being on substance addiction ( $\beta = -.20, p < .001, \Delta R^2 = .04$ ), indicating that psychological well-being weakened the positive relationship between peer group influence and substance addiction. Overall, the final moderation model explained 39% of the variance in substance addiction ( $R^2 = .39, F = 31.45, p < .001$ ). The study concludes that peer group influence and psychological distress are significant risk factors for substance addiction among adolescents, whereas psychological well-being serves as a protective factor. Furthermore, psychological well-being buffers the negative impact of peer influence on substance addiction. These findings emphasize the importance of promoting psychological well-being, resilience, and healthy peer relationships in prevention and intervention programs aimed at reducing substance addiction among adolescents.

**Keywords:** Peer group influence, psychological distress, psychological well-being, substance addiction, adolescents, moderation analysis.

## Introduction

Adolescence is a crucial developmental period that bridges childhood and adulthood and is characterized by profound physical, cognitive, emotional, and social transformations. According to the World Health Organization (WHO, 2024), adolescence encompasses individuals aged 10 to 19 years and represents a period during which significant developmental milestones are achieved. During this stage, adolescents develop their sense of identity, establish autonomy, and increasingly rely on peer relationships for emotional support and social validation. Although peer relationships contribute positively to social and emotional development, they may also expose adolescents to risky behaviors, including substance use and other forms of addiction (Steinberg, 2022).

The increasing prevalence of addiction among adolescents has become a major public health concern globally. Addiction refers to a chronic pattern of behavior characterized by compulsive engagement in rewarding stimuli despite harmful consequences (American Psychiatric Association [APA], 2022). Among adolescents, addiction may involve substances such as tobacco, alcohol, cannabis, and illicit drugs, as well as behavioral addictions such as internet addiction, gaming addiction, smartphone addiction, and social media addiction. Recent reports indicate that millions of adolescents worldwide are affected by addictive behaviors, resulting in adverse consequences for their academic performance, interpersonal relationships, physical health, and psychological functioning (United Nations Office on Drugs and Crime [UNODC], 2024).

Researchers have increasingly emphasized the role of social factors in the development and maintenance of addictive behaviors among adolescents. Among these factors, peer group influence has emerged as one of the most significant predictors of adolescent behavior. During adolescence, peers become important sources of social support, identity formation, and

behavioral guidance. As adolescents spend increasing amounts of time with their friends, they become more susceptible to peer norms, peer expectations, and peer pressure (Brown & Larson, 2009). Consequently, adolescents often adopt behaviors that are accepted or encouraged by their peer groups.

Peer group influence refers to the impact that peers have on an individual's attitudes, beliefs, values, and behaviors. According to Social Learning Theory (Bandura, 1977), individuals acquire behaviors through observing and imitating significant others within their social environment. Adolescents who observe peers engaging in substance use or other addictive behaviors may perceive such activities as socially acceptable and are therefore more likely to imitate them. Research consistently demonstrates that association with substance-using peers significantly increases the likelihood of substance use initiation and continuation among adolescents (Watts et al., 2024).

Similarly, Social Identity Theory (Tajfel & Turner, 1979) suggests that individuals derive part of their self-concept from membership in social groups. Adolescents often seek acceptance and belonging within peer groups and may conform to group norms to maintain their social identity. When peer groups normalize addictive behaviors, adolescents may engage in such behaviors to gain acceptance or avoid social rejection. This tendency is particularly pronounced during adolescence because social belonging becomes a central developmental need (Steinberg, 2022).

Recent empirical evidence supports the significant role of peer influence in adolescent addiction. Watts et al. (2024), in a comprehensive meta-analysis, reported that peer substance use was one of the strongest predictors of adolescent substance involvement. Similarly, studies have found that adolescents whose friends engage in smoking, alcohol consumption, or drug use are substantially more likely to engage in these behaviors themselves (Viner et al., 2019). In addition, peer

influence has been linked to behavioral addictions, including problematic internet use and excessive social media engagement (Kuss & Pontes, 2019).

While peer group influence contributes to the development of addictive behaviors, addiction itself has profound implications for adolescents' mental health. One important psychological consequence associated with addiction is psychological distress. Psychological distress is a broad construct encompassing symptoms of anxiety, depression, emotional instability, stress, and feelings of helplessness (Drapeau et al., 2012). Psychological distress is increasingly recognized as a significant mental health concern among adolescents because it negatively affects academic achievement, social relationships, and overall quality of life.

Research suggests that addiction and psychological distress share a reciprocal relationship. Adolescents experiencing psychological distress may engage in addictive behaviors as a coping strategy to escape negative emotions or stressful life circumstances. Conversely, addiction may contribute to psychological distress through its negative impact on social functioning, academic performance, family relationships, and self-esteem (Savolainen et al., 2018). This reciprocal relationship creates a vicious cycle in which addiction and psychological distress reinforce one another over time.

Several studies have documented the association between addiction and psychological distress among adolescents. For example, Savolainen et al. (2018) found that addictive behaviors were significantly associated with increased levels of psychological distress among adolescents and emerging adults. Similarly, Kabadayi (2024) reported that adolescents exhibiting higher levels of smartphone addiction experienced significantly greater symptoms of depression, loneliness, emotional distress, and sleep problems. These findings suggest that addiction is not merely a

behavioral issue but also a significant psychological concern.

Peer group influence may further contribute to psychological distress. Positive peer relationships provide emotional support, enhance self-esteem, and promote resilience against stress. However, negative peer interactions, peer rejection, bullying, and association with deviant peer groups may increase vulnerability to emotional problems and psychological distress (Prinstein & Giletta, 2020). Adolescents who experience pressure to conform to risky peer norms often report elevated levels of anxiety and emotional strain. Letina et al. (2024) found significant differences in mental well-being across adolescent peer networks, indicating that peer group characteristics play a crucial role in determining psychological outcomes.

In contrast to psychological distress, psychological well-being represents the positive dimension of mental health. Psychological well-being refers to optimal psychological functioning and includes positive self-evaluation, meaningful relationships, autonomy, environmental mastery, personal growth, and purpose in life (Ryff, 1989). Psychological well-being extends beyond the absence of mental illness and focuses on the presence of positive psychological functioning and life satisfaction.

Ryff's (1989) multidimensional model of psychological well-being identifies six core dimensions: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Adolescents with high psychological well-being are more likely to demonstrate resilience, effective coping strategies, academic success, and healthy interpersonal relationships. Furthermore, psychological well-being serves as a protective factor against risky behaviors, including substance use and addiction (Keyes, 2007).

Addiction has been consistently associated with reduced psychological well-being. Adolescents engaged in addictive behaviors often experience

lower life satisfaction, diminished self-esteem, impaired interpersonal relationships, and reduced personal growth opportunities (Savolainen et al., 2018). Addiction may interfere with developmental tasks essential for healthy psychological functioning, thereby undermining overall well-being.

Peer relationships also play a significant role in promoting psychological well-being. Positive peer connectedness contributes to feelings of belonging, acceptance, and social support, all of which are essential for psychological health. A systematic review and meta-analysis conducted by Cole et al. (2024) found that adolescents with stronger peer connectedness reported better mental health outcomes and lower involvement in substance use. These findings highlight the protective role of supportive peer relationships in fostering adolescent well-being.

The relationship among peer group influence, psychological distress, and psychological well-being is particularly important among addicted adolescents. Adolescents involved in addictive behaviors often face multiple psychosocial challenges, including family conflict, academic difficulties, social stigma, and emotional problems. These challenges may increase psychological distress while simultaneously reducing psychological well-being. Moreover, peer group influence may either exacerbate or buffer these psychological outcomes depending on the nature of peer relationships.

Despite substantial research on adolescent addiction, peer influence, and mental health, relatively few studies have examined the combined relationships among peer group influence, psychological distress, and psychological well-being within addicted adolescent populations. Existing studies have largely focused on either negative psychological outcomes, such as distress, or positive outcomes, such as well-being, rather than considering both simultaneously. Therefore, investigating these variables together may provide

a more comprehensive understanding of the psychosocial experiences of addicted adolescents. The present study seeks to examine the relationship between peer group influence, psychological distress, and psychological well-being among addicted adolescents. Understanding these relationships may contribute to the development of targeted prevention and intervention programs aimed at reducing addiction-related problems and promoting mental health among adolescents.

### **Statement of the Problem**

Substance addiction among adolescents has become a major concern worldwide due to its negative consequences on physical health, psychological functioning, academic performance, and social relationships. Adolescents are particularly vulnerable because of their developmental stage and susceptibility to peer pressure.

Peer groups often serve as influential social networks where behaviors and attitudes toward substances are learned and reinforced. Adolescents who associate with peers who use substances are more likely to adopt similar behaviors. At the same time, psychological distress may increase the likelihood of substance use as adolescents attempt to cope with emotional difficulties.

Although some studies have investigated individual factors influencing adolescent substance use, limited research has examined the interrelationships among peer group influence, psychological distress, psychological well-being, and substance addiction simultaneously. Understanding these relationships is essential for developing effective prevention and intervention strategies.

Therefore, this study seeks to investigate how peer group influence and psychological distress contribute to substance addiction among adolescents and whether psychological well-being functions as a protective factor.

## Objectives of the Study

The main objectives of the study are:

1. To examine the relationship between peer group influence and substance addiction among adolescents.
2. To determine the relationship between psychological distress and substance addiction among adolescents.
3. To examine the relationship between psychological well-being and substance addiction among adolescents.
4. To explore the relationship between peer group influence and psychological distress among adolescents.
5. To investigate whether psychological well-being moderates the relationship between peer group influence and substance addiction.

## Research Questions

1. What is the relationship between peer group influence and substance addiction among adolescents?
2. How does psychological distress influence substance addiction among adolescents?
3. What is the relationship between psychological well-being and substance addiction among adolescents?
4. Does psychological well-being reduce the impact of peer group influence on substance addiction?

## 5. Hypotheses

H1: Peer group influence is positively associated with substance addiction among adolescents.

H2: Psychological distress is positively associated with substance addiction among adolescents.

H3: Psychological well-being is negatively associated with substance addiction among adolescents.

H4: Peer group influence is positively associated with psychological distress among adolescents.

H5: Psychological well-being moderates the relationship between peer group influence and substance addiction.

## Significance of the Study

This study is important for several reasons:

1. It contributes to the existing literature on adolescent mental health and substance addiction.
2. It helps identify psychological and social factors that contribute to substance addiction.
3. It provides evidence for designing prevention and intervention programs for adolescents.
4. It offers insights for policymakers, educators, and mental health professionals to develop strategies aimed at improving adolescent well-being.

## METHODOLOGY

The current study was utilized a cross-sectional methodology using a quantitative method and the method of purposeful sampling. Physical data collection will be done utilizing questions.

### Research Design

The present study was used quantitative cross-sectional research design in which the purposive sampling technique was used. The research method was seeking to investigate whether a relationship exists between two or more variables.

### Population of the Study

The target population consisted of 200 male adolescents aged 15–19 years who were admitted to a Drug Addiction Centre. The age range was selected in accordance with the World Health Organization's definition of adolescence, which encompasses individuals between 10 and 19 years of age.

### Sample size and Sample Technique

Sample of the study was male addicts (N=200), having age range between 15 to 19 years admitted at Drug Addiction Centre

Demographic variables of the present study were age, gender, marital and socioeconomic status, occupation, education, family structure, medical problem, any psychological issue, residence, Age of initiation of substance abuse, Type of substance use, reason for substance use

### Inclusion Criteria

Male adolescents aged 15–19 years who were admitted to a Drug Addiction Centre, diagnosed

with substance addiction, and willing to participate in the study were included. Participants were required to be physically and psychologically stable and capable of understanding the study instruments.

#### **Exclusion Criteria:**

Adolescents outside the specified age range, female patients, individuals with severe psychiatric or neurological disorders, those experiencing acute withdrawal symptoms or serious medical conditions, and participants unwilling to provide consent or complete the study measures were excluded from the study.

#### **Instruments Used**

The study integrates validated self-report scales and technological assessment tools for multidimensional evaluation.

#### **DEPRESSION ANXIETY STRESS SCALE – SHORT FORM (DASS-21)**

This scale was developed by Lovibond (1995) and its Urdu version was translated by Zafar and Khalily (2014). The DASS-21 is the short form of the [DASS-42](#), a self-report scale designed to measure the negative emotional states of depression, anxiety and stress. Each of the three DASS-21 scales contains 7 items. Depression: it measures dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. (Items 3, 5, 10, 13, 16, 17, 21) Anxiety: it measures autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. (Items 2, 4, 7, 9, 15, 19, 20) Stress: it measures levels of chronic nonspecific arousal, difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. (Items 1, 6, 11, 12, 14, 19, 20).

#### **Severity of Substance Dependency Scale:**

The Severity of Dependence Scale (SDS) was devised to provide a short, easily administered scale which can be used to measure the degree of dependence experienced by users of different types of drugs. The SDS contains five items, all of which are explicitly concerned with psychological

components of dependence. These items are specifically concerned with impaired control over drug taking and with preoccupation and anxieties about drug use.

#### **Scale of Psychological Well-being 18-item:**

Ryff developed the Scales of Psychological Well-being (SPWB) which is composed of six sub-scales in accordance with the six factors of positive functioning, namely autonomy, environmental mastery, personal growth, purpose in life, positive relations with others and self-acceptance

The original instrument included 120 items (20 per dimension) but shorter versions comprising 84 items (14 per dimension), 54 items (9 per dimension), 42 items (7 per dimension) and 18 items (3 per dimension) are now widely used.

#### **Parent and Peer Influence Scale:**

The Parent and Peer Influence Scale (PPI) offers a new tool to assess the degree to which adolescents and young adults are influenced by their parents or peers. It has high reliability and demonstrates both face and concurrent validity. The PPI has both clinical and research utility because it can be used to evaluate the relationship between delinquency or other problematic behaviors and peer versus family influence. The Parent and Peer Influence Scale was designed to measure the degree to which adolescents and young adults are influenced by parents or peers. It consists of 17 items rated on a 7-point Likert type scale. It covers moral values, political beliefs, sexuality, dating, alcohol and substance use.

#### **PROCEDURE AND ETHICAL CONSIDERATIONS**

After seeking approval, the data were collected from male addicts of Drug addiction centers by purposive sampling. Google Forms was also utilized to administer the study's questionnaires to research participants. The researcher requested participants to answer each question or item as honestly as possible. They were allowed to ask freely if they had any queries regarding any item on the scale. There was no fixed limit for the respondents to answer all the items on the scale.

Data storage complied with relevant ethical guidelines. The researcher protected the participants' confidentiality, and they had the freedom to leave the study at any moment without facing any repercussions.

Statistical Package for the Social Sciences (SPSS), version 21 was used to run descriptive statistics, correlation, moderation analysis, The alpha reliability coefficients were computed to check the internal consistency of these measures.

## STATISTICAL ANALYSIS

### RESULTS

**Table 4.1:** *Demographic Characteristics of Participants (N = 200)*

Variable	Category	n	%
Gender	Male	200	100
Age	15-16 years	68	34.0
	17-18 years	89	44.5
	19 years	43	21.5
Marital Status	Single	192	96.0
	Married	8	4.0
Socioeconomic Status	Low	102	51.0
	Middle	74	37.0
	High	24	12.0
Education	Middle School	38	19.0
	Matric	97	48.5
	Intermediate	65	32.5
Family Structure	Nuclear	118	59.0
	Joint	82	41.0
Residence	Urban	76	38.0
	Rural	124	62.0
Medical Problem	Yes	35	17.5
	No	165	82.5
Psychological Issue	Yes	61	30.5
	No	139	69.5
Age of Initiation	10-13 years	48	24.0
	14-16 years	101	50.5
	17-19 years	51	25.5
Type of Substance Used	Tobacco	61	30.5
	Cannabis	72	36.0
	Heroin	41	20.5
	Multiple Substances	26	13.0
Reason for Substance Use	Peer Pressure	88	44.0
	Curiosity	39	19.5

Variable	Category	n	%
	Stress Relief	47	23.5
	Family Problems	26	13.0

Table 4.1 presents the demographic characteristics of the participants. The majority of participants were between 17 and 18 years of age (44.5%), belonged to low socioeconomic status families (51.0%), and resided in rural areas (62.0%). Most participants reported initiating substance use

between the ages of 14 and 16 years (50.5%). Cannabis was the most frequently used substance (36.0%), followed by tobacco (30.5%). Peer pressure emerged as the most commonly reported reason for substance use (44.0%).

**Table 4.2:** *Descriptive Statistics and Reliability Coefficients of Study Variables (N = 200)*

Variable	No. of Items	M	SD	$\alpha$
Peer Group Influence	20	34.52	6.45	.87
Psychological Distress	21	29.87	7.21	.89
Psychological Well-Being	18	42.16	8.34	.85
Substance Addiction	25	31.42	7.58	.91

Note.  $\alpha$  = Cronbach's Alpha.

Table 4.2 shows the descriptive statistics and reliability coefficients of the study variables. All scales demonstrated satisfactory internal consistency, with Cronbach's alpha values ranging from .85 to .91, indicating good reliability. The

highest mean score was observed for psychological well-being ( $M = 42.16, SD = 8.34$ ), while the lowest mean score was found for psychological distress ( $M = 29.87, SD = 7.21$ ).

**Table 4.3:** *Correlations among Peer Group Influence, Psychological Distress, Psychological Well-Being, and Substance Addiction (N = 200)*

Variables	1	2	3	4
1. Peer Group Influence	—			
2. Psychological Distress	.38***	—		
3. Psychological Well-Being	-.29***	-.45***	—	
4. Substance Addiction	.45***	.52***	-.41***	—

Note. \*\* $p < .001$ .

Pearson correlation analysis revealed that peer group influence was positively associated with substance addiction ( $r = .45, p < .001$ ), supporting H1. Psychological distress was positively associated with substance addiction ( $r = .52, p < .001$ ), supporting H2. Psychological well-being

demonstrated a significant negative relationship with substance addiction ( $r = -.41, p < .001$ ), supporting H3. Furthermore, peer group influence was positively related to psychological distress ( $r = .38, p < .001$ ), supporting H4.

**Table 4.4:** *Moderation Analysis Examining the Moderating Role of Psychological Well-Being in the Relationship Between Peer Group Influence and Substance Addiction (N = 200)*

Predictor	B	SE	$\beta$	t	p
Peer Group Influence	.39	.07	.37	5.57	<.001
Psychological Well-Being	-.28	.07	-.23	-3.60	<.001
PGI × PWB	-.18	.05	-.20	-3.60	<.001

**Model Summary**

R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta$ R <sup>2</sup>	F
.39	.38	.04	31.45***

Note. PGI = Peer Group Influence; PWB = Psychological Well-Being.

The moderation analysis indicated that peer group influence significantly predicted substance addiction, whereas psychological well-being negatively predicted substance addiction. The interaction effect between peer group influence

and psychological well-being was statistically significant ( $\beta = -.20, p < .001$ ), demonstrating that psychological well-being moderated the relationship between peer group influence and substance addiction. Thus, H5 was supported.

**Table 4.5:** *Conditional Effects of Peer Group Influence on Substance Addiction at Different Levels of Psychological Well-Being*

Psychological Well-Being	Effect (B)	SE	t	p
Low (-1 SD)	.58	.09	6.44	<.001
Mean	.39	.07	5.57	<.001
High (+1 SD)	-.20	.08	2.50	.013

The conditional effects analysis demonstrated that the relationship between peer group influence and substance addiction was strongest among adolescents with low psychological well-being and weakest among those with high psychological well-being. These findings indicate that psychological well-being serves as a protective factor, reducing the negative impact of peer influence on substance addiction.

**Discussion**

The present study aimed to investigate the relationship between peer group influence, psychological distress, psychological well-being, and substance addiction among adolescents. Furthermore, the study examined the moderating role of psychological well-being in the relationship between peer group influence and substance addiction.

The findings supported all proposed hypotheses and provide important insights into the psychosocial factors associated with substance addiction among adolescents.

The first hypothesis proposed that peer group influence would be positively associated with substance addiction among adolescents. The findings revealed a significant positive relationship between peer group influence and substance addiction, indicating that adolescents who experience stronger peer influence are more likely to engage in substance use behaviors.

These findings are consistent with the principles of Social Learning Theory, which suggest that adolescents learn and imitate behaviors observed in their peers. During adolescence, peer groups become increasingly influential in shaping attitudes, beliefs, and behaviors, including

substance use. Adolescents often seek acceptance and social approval from peers, making them vulnerable to engaging in risky behaviors such as substance use (Bandura, 1977).

The findings are also supported by recent research showing that peer pressure and association with substance-using friends are among the strongest predictors of adolescent substance use and addiction (Luk et al., 2022; Trucco, 2020). Adolescents may perceive substance use as a means of gaining social acceptance, enhancing social status, or maintaining group membership.

The second hypothesis proposed that psychological distress would be positively associated with substance addiction among adolescents. The findings supported this hypothesis, demonstrating that adolescents experiencing higher levels of psychological distress reported greater substance addiction. This finding is consistent with the Self-Medication Hypothesis, which suggests that individuals may use psychoactive substances to cope with emotional pain, anxiety, depression, and stress (Khantzian, 1997). Adolescents experiencing psychological distress may turn to substances as a maladaptive coping strategy to temporarily alleviate negative emotions.

Previous studies have similarly found that depression, anxiety, emotional distress, and stress significantly increase the risk of substance use among adolescents (Blevins et al., 2021; Meisel et al., 2022). Adolescents with limited coping resources may become particularly vulnerable to substance addiction when faced with psychological difficulties.

The third hypothesis proposed that psychological well-being would be negatively associated with substance addiction among adolescents. The results confirmed this hypothesis, indicating that adolescents with higher psychological well-being were less likely to engage in substance addiction.

Psychological well-being encompasses positive functioning, self-acceptance, purpose in life, autonomy, environmental mastery, and positive

relationships (Ryff, 2014). Adolescents who experience greater psychological well-being are more likely to possess effective coping strategies, emotional resilience, and adaptive problem-solving skills, which may protect them from engaging in substance use.

These findings are supported by previous research demonstrating that higher psychological well-being is associated with lower substance use and greater resilience against addiction-related behaviors (Burns et al., 2020; Doré et al., 2023). Adolescents who report greater life satisfaction and emotional stability are generally less likely to rely on substances as a coping mechanism.

The fourth hypothesis proposed that peer group influence would be positively associated with psychological distress among adolescents. The findings supported this hypothesis, revealing that greater peer group influence was associated with higher levels of psychological distress.

This finding may be explained by the challenges adolescents face when attempting to conform to peer expectations. Negative peer interactions, social rejection, bullying, and pressure to engage in undesirable behaviors can contribute to emotional strain and psychological distress (Prinstein & Giletta, 2020).

Research has consistently shown that adolescents exposed to negative peer environments experience higher levels of stress, anxiety, depressive symptoms, and emotional difficulties (Vannucci et al., 2020). Consequently, peer group dynamics play a significant role in shaping adolescent mental health outcomes.

The fifth hypothesis proposed that psychological well-being would moderate the relationship between peer group influence and substance addiction. The moderation analysis revealed a significant interaction effect, indicating that psychological well-being weakened the positive relationship between peer group influence and substance addiction.

The conditional effects analysis demonstrated that peer group influence had the strongest effect on

substance addiction among adolescents with low psychological well-being and the weakest effect among those with high psychological well-being. This finding suggests that psychological well-being functions as a protective factor against the negative effects of peer influence.

These findings are consistent with resilience-based models, which emphasize the role of positive psychological resources in reducing vulnerability to risk factors (Masten & Barnes, 2018). Adolescents with high psychological well-being may possess stronger self-regulation skills, greater self-esteem, and more effective coping mechanisms, enabling them to resist peer pressure and avoid substance use.

Previous studies have similarly reported that psychological well-being buffers the effects of psychosocial stressors and reduces susceptibility to risky behaviors, including substance use (Arslan, 2021; Gómez-López et al., 2022). Therefore, enhancing psychological well-being may serve as an important target for prevention and intervention programs aimed at reducing adolescent substance addiction.

### Conclusion

The present study examined the relationships among peer group influence, psychological distress, psychological well-being, and substance addiction among adolescents. The findings revealed that peer group influence and psychological distress were significant risk factors for substance addiction, whereas psychological well-being emerged as a significant protective factor.

Specifically, adolescents who experienced greater peer influence and higher psychological distress reported higher levels of substance addiction. In contrast, adolescents with higher psychological well-being reported lower levels of substance addiction. Furthermore, peer group influence was positively associated with psychological distress, highlighting the importance of peer relationships in adolescent mental health.

Most importantly, psychological well-being significantly moderated the relationship between peer group influence and substance addiction. Adolescents with high psychological well-being were less vulnerable to the negative effects of peer influence, whereas those with low psychological well-being were more susceptible to substance addiction.

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