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ORIGINAL ARTICLE

Dishonesty Among Adolescents: Prevalence, Predictors, and Relation to Self-Esteem; A Cross-Sectional Study

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ABSTRACT

Background: Adolescence is characterized by significant biological, psychological, and social transitions. Dishonesty is one of the most widespread issues today. This study aims to assess dishonesty prevalence, risk factors, and the relation to self-esteem.

Methods: A cross-sectional study was done on 279 adolescents at Abu-Hammad district commercial high schools during the academic year 2024- 2025. All students, after obtaining informed consent from their guardians, filled out an interview questionnaire for personal data, an assessment of dishonesty (including dishonest behavior such as lying, cheating, stealing, plagiarism, and withholding information), and the Rosenberg self-esteem questionnaire.

Results: about 57% were male and 62.7% were over 16 years old. About 54% had low self-esteem. Concerning domains of dishonesty, 67.7%, 71.3%, 30.5%, 21.1% and 27.7% frequently lie, cheat, steal, adopt plagiarism and withhold information respectively and overall, 29.7% had dishonest discipline Overall, 29.7% had dishonest discipline There is a statistically significant relation between dishonesty in adolescent and gender, father education, father occupation, mother occupation, mother occupation, family income and residence. Multivariate analysis confirmed that being male, having a low family income, and lower levels of self-esteem were independently associated with a higher risk of dishonesty

Conclusion: Dishonest discipline, with its different aspects, is a frequent social problem that should be given sufficient attention. Male gender, low family income, and lower self-esteem were predictors of dishonesty among adolescents. Family physicians as care providers should screen adolescents for dishonesty and should communicate with community leaders to design a campaign to address this ethical problem

Keywords: Academic, dishonesty, adolescents, self-esteem

INTRODUCTION

Adolescence represents a pivotal period of human development, marked by significant biological, psychological, and social transitions. These transitions not only underpin the shift from childhood dependency to adult autonomy but also contribute to heightened vulnerability to environmental influences, such as family dynamics, peer relationships, and socio-emotional stressors(1)[1][1]. During this stage, the prefrontal cortex—the brain area responsible for decision-making, impulse control, and risk assessment is still maturing,

which partially explains the increased engagement in risk-taking behaviors[2][2][2]. Furthermore, adolescence is often the onset period for various behavioral and psychiatric conditions, such as substance use disorders, depression, and conduct problems, reinforcing the necessity for a nuanced understanding of the factors that shape adolescent behavior [3][4][5].

Dishonesty is one of the most widespread issues today. It can be defined as acting, or attempting to act, without honesty. This term typically refers to behavior that lacks integrity or moral principles, such as lying, cheating, or intentionally deceiving others. Academic dishonesty refers to unethical behavior within an academic environment. Numerous studies across various disciplines have revealed alarmingly high rates of such dishonesty [6].

Academic dishonesty is a significant concern, as proven by studies in various professions. A comprehensive study in the US and Canada reported 47% to 84% of academic dishonesty. Another experiment found that 61.6% and 75% of students engaged in cheating behavior, according to staff and student perspectives. A self-reported survey revealed that 93.4% of students engaged in academic dishonesty. [3]

Self-esteem also plays a pivotal role in adolescent development, acting as both a protective factor and a risk indicator depending on its level and stability. Adolescents with higher self-esteem tend to exhibit greater resilience, lower susceptibility to peer pressure, and reduced likelihood of engaging in delinquent or risky activities [7].

Despite an increasing global interest in young people's behavioral health, the frequency and psychosocial consequences of dishonest behavior among teenagers, particularly in terms of self-esteem, have not been adequately investigated in Egypt. Most of the current research is either outdated or focuses on certain scenarios (for example, academic cheating). This gap underlines the importance of conducting comprehensive, regional studies that investigate dishonesty in a larger teenage population while accounting for psychological, educational, and cultural factors.

This study aims to assess dishonesty prevalence, risk factors, and the relation to self-esteem.

Methods.

METHODS

Study Design and Setting:

A cross-sectional study was conducted on adolescents at Abu-Hammad district commercial high schools during the academic year 2024- 2025. Abu-Hammad is a semi-urban location with both public and private educational institutions, combining rural and urban elements. Several coeducational, commercial secondary schools in the district serve teenagers from various socioeconomic backgrounds. By emphasizing business-related programs, these institutions attract students who would not otherwise pursue general academic tracks. Adolescents aged 15 to 18, both genders, agreed to participate in the study after receiving consent from their caregivers/parents. The study adhered to the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines for cross-sectional studies.

Ethical Approval and Informed Consent

This study was conducted following the Declaration of Helsinki and was approved by the Institutional Review Board (IRB) committee at the Faculty of Medicine, Zagazig University (IRB Number 10769). Written informed consent was obtained from each participant’s legal guardian before data collection. Students were enrolled only after guardian approval was documented. Participants' privacy and confidentiality were strictly maintained throughout the

study. No names, initials, or identifying data were collected or published.

Sampling

Assuming that the proportion of adolescents with academic dishonesty is 51.7% [8] and the number of students at high schools in Abu-Hammad district is about 1000, the sample size was 279 students calculated using the open Ipi Info program, at a power 80%, a precision level of 95% and an effect size of 1. A multistage sampling technique was adopted. From three schools, one was selected by a simple random technique, then, via a simple random technique, 279 students were selected, and a consent form was given to each. If a parent signed, the student was included; if refused, another one was selected till completion of the sample

Study tools:

I. **Assessment of sociodemographic data of students:** A standardized data collection sheet designed specifically for this study was used to assess sociodemographic characteristics. It considered parameters such as family income, parental education, parental occupation, age, gender, and place of residence. A panel of three family and community medicine professionals evaluated the tool's content validity after it was developed through a literature study and expert consultations. In pilot research with 28 students, face validity was further investigated; no significant adjustments were required, demonstrating the tool's cultural adaptability and intelligibility. It is a researcher-designed, validated instrument that is tailored to the study situation, even though it is not a standardized scale.

II. **Rosenberg Self-Esteem Scale (appendix II)**

A 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. All items were answered using a 4-point Likert scale format, ranging from strongly agree to strongly disagreement. These items include a list of statements dealing with their general feelings about themselves; they indicate how strongly they agree or disagree with their behaviors. The scale ranges from 0 to 30 scores between 15 and 25 within the normal range; scores below 15 suggest low self-esteem [9]. Questionnaires were translated into Arabic through backward-forward translation with the aid of two bilingual experts, and it was validated (Cronbach's alpha 0.82)

III. Structured questionnaire to assess academic dishonesty

The questionnaire consisted of 15 items designed to assess individuals' engagement in various forms of dishonest behavior, including lying, cheating, stealing, plagiarism, and withholding information. Each domain was represented by three statements, and participants responded using a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The lying dimension measured the extent to which individuals admit to deception for self-protection, self-enhancement, or to protect others. Cheating items explored academic dishonesty, such as copying homework, using unauthorized assistance, and manipulating academic results. The stealing section assessed the frequency of taking items without permission in different contexts. Plagiarism is focused on the misrepresentation of authorship in academic work. Lastly, withholding information captures tendencies to avoid full disclosure, particularly in situations that may lead to negative consequences for oneself or others.

When students get≥60% of each domain, they are dishonest concerning this domain, and if ≥60% of the total score, they are considered to adopt dishonest behavior. The questionnaire was validated through experts from Family and Community Medicine

departments, and Cronbach's alpha was calculated via a pilot study to be 0.81

Operational design: After getting all official permissions:

A pilot study was done on 28 students to check the clarity of data tools and the time required to fill in questionnaires. As no modifications were made, students were included in the total sample.

Field work: Students whose parents signed in consent form were interviewed by the investigator, who distributed questionnaires to students during a break in a private class and/or library to fill in three questionnaires. The time was about 30 minutes.

Data analysis

Multiple logistic regression was used in a multivariate analysis to find independent predictors of dishonest behavior in teenagers. The model included variables whose univariate analysis p-value was less than 0.05. 95% CIs and adjusted odds ratios (AORs) were computed. The model's goodness of fit was evaluated using the Hosmer and Lemeshow test.

All data were collected, tabulated, and statistically analyzed using IBM Corp., released in 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp. Quantitative data were expressed as the mean ± SD, range, and qualitative data were expressed as number & percentage. The percentage of categorical variables was compared using a chi-squared test or Fisher's exact test if appropriate. Multiple logistic regression is used to describe data and to explain the relationship between one dependent categorical variable and one or more continuous, categorical independent variables. All tests were two-sided. P-value < 0.05 was considered statistically significant.

RESULTS

Table 1 presents the demographic characteristics of the adolescents studied. Among the 279 participants, 56.5% were male. All respondents were aged between 15 and 18 years; 175 adolescents (62.7%) were over 16 years old. Regarding parental education, 40.9% of fathers and 26.9% of mothers had attained a university-level education. In terms of occupation, 35.5% of fathers were professionals compared to 26.9% of mothers. Additionally, 34.4% of the participants reported having sufficient economic income. Most adolescents (94.6%) resided in rural villages (Table 1). On assessing self-esteem of students, 53.8% of the adolescents studied had low self-esteem (Figure 1).

According to the domains of honesty assessed, 189 students (67.7%) frequently lie, 199 (71.3%) frequently cheated, 85 students (30.5%) frequently steal, 59 students adopted plagiarism frequently (21.1%), and 69 students frequently withhold information, and overall, 29.7% had dishonest discipline (Figure 2)

Table 2 illustrates that there is a statistical relationship between dishonesty in adolescents and gender, father's education, father's occupation, mother's education, mother's occupation, family income, and residence.

Univariate analysis revealed several significant factors associated with dishonest behavior among adolescents. Males were 3.1 times more likely to engage in dishonesty compared to females (95% CI: 1.742–5.431). Adolescents with fathers who were workers were 5.2 times more likely to be dishonest than those whose fathers were professionals (95% CI: 2.433–11.171). Maternal education also showed a significant association: adolescents with illiterate mothers and those whose mothers had only a secondary education were 4.4 and 2.6 times more likely, respectively, to

exhibit dishonest behavior compared to those whose mothers had a university education (95% CI: 1.613–12.231 and 1.316–5.237).In terms of family income, adolescents from families with a shortage of income were 5.4 times more likely to be dishonest than those from families with enough or rich income (95% CI: 1.802–15.961). Self-esteem levels were also strongly linked to dishonesty, with adolescents having low and moderate self-esteem being 5.5 and 3.1 times more likely, respectively, to exhibit dishonest behavior compared to those with high self-esteem (95% CI: 2.337–12.776 and 1.192–8.143) (Table 3).

Multivariate analysis confirmed that being male, having a low family income, and lower levels of self-esteem were independently associated with a higher risk of dishonesty among adolescents. (Table 3).

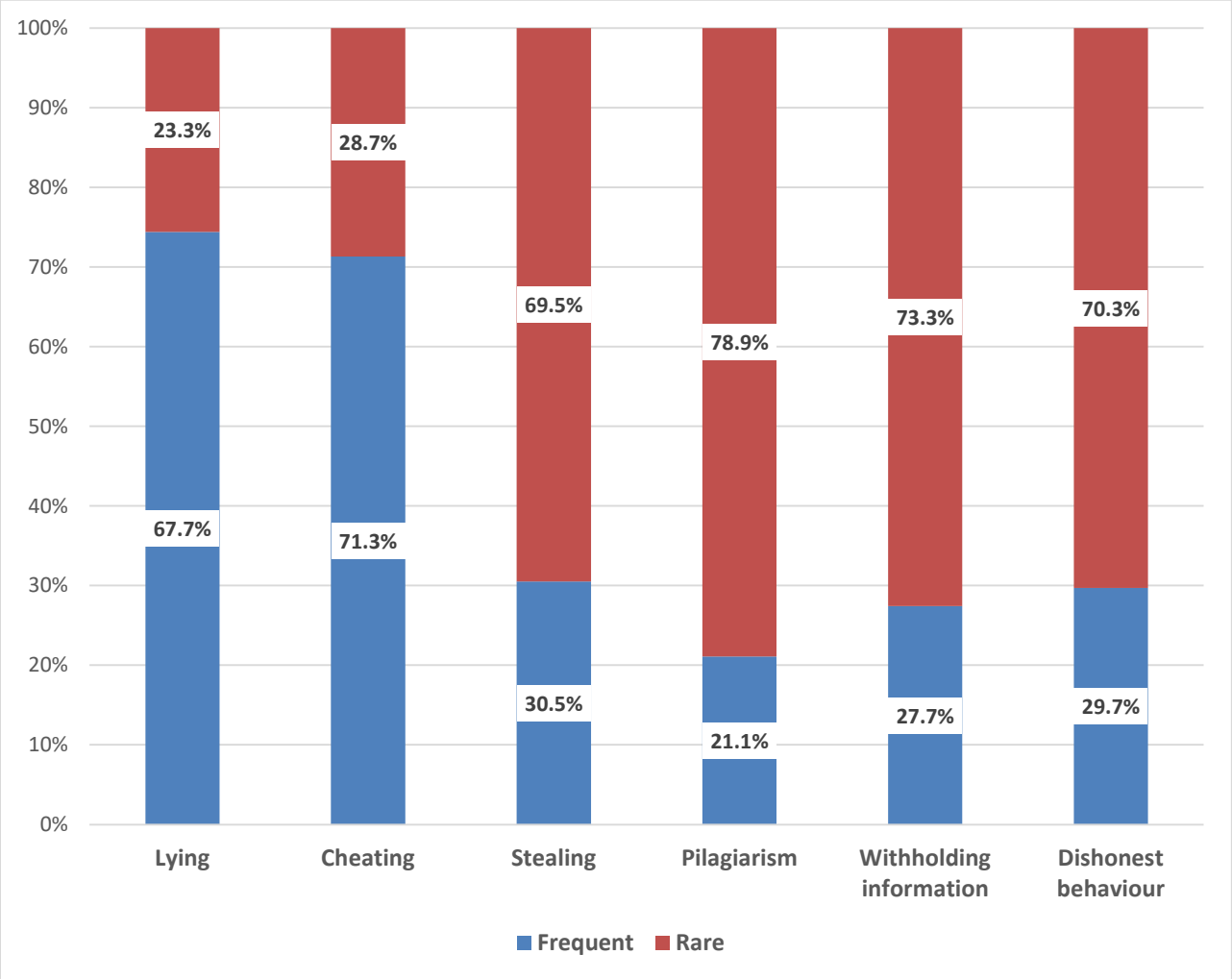

Figure 1: Compound bar chart showing the distribution of honesty domains of studied adolescents

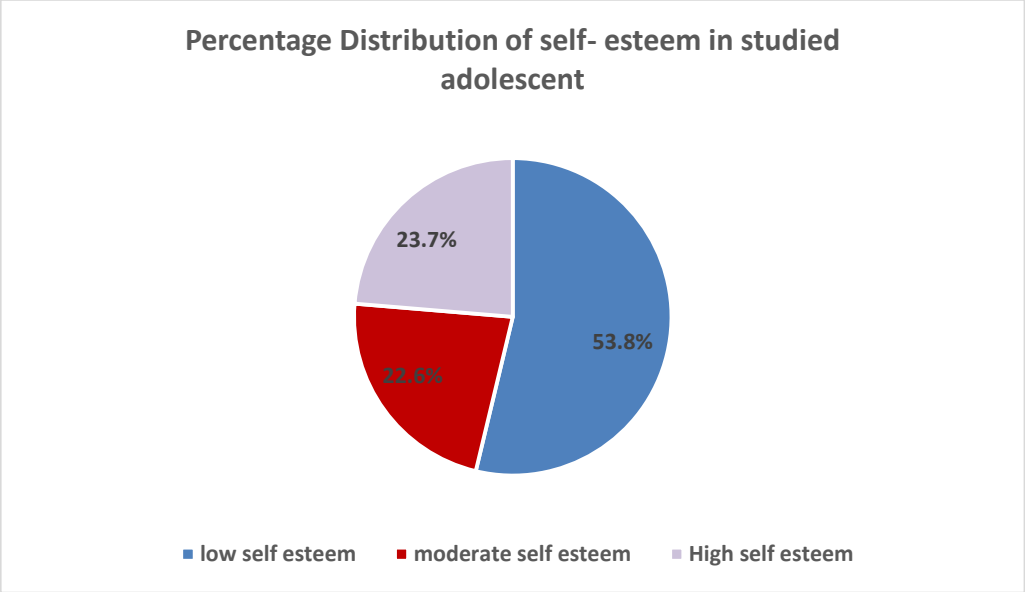

Figure (2): Frequency and Percentage Distribution of self-esteem in adolescents studied.

Table (1): Frequency and Percentage Distribution of adolescents studied according to Personal characteristics.

Variables. Total=279		no	%
Gender	Females	121	43.4
	Males	158	56.6
Age in years	<16 years	104	37.3
	≥16 years	175	62.7
	Mean ± Sd (range)	16.01±0.83 (15-18)	
Fathers' educational level	Illiterate	3	1.1
	Secondary	162	58.1
	University	114	40.9
Fathers' occupation	Professional	99	35.5
	Employee	45	16.1
	Craftsman	68	24.4
	Technician	20	7.2
	Manual worker	47	16.8
mothers' educational level	Illiterate	24	8.6
	Secondary	180	64.5
	University	75	26.9
mothers' occupation	housewife	136	48.7
	Professional	75	26.9
	Employee	65	23.3
	Manual worker	3	1.1
Family income	not enough	147	52.7
	Enough	96	34.4
	enough and more	36	12.9
residence	City	15	5.4
	Village	264	94.6

Table 2: Relation between adolescent honesty behavior and their demographic characteristics (n. 279):

Variables	Honesty				χ^2	P-value
	Dishonesty n.83		Honesty n.196			
	No.	%	No.	%		
Age groups						
<16 years	28	26.9	76	73.1	0.643	0.426
≥16 years	55	31.4	120	68.6		
Sex						
Females	21	17.3	100	82.6	15.70	0.001*
Males	62	39.2	96	60.8		
Father education						
Illiterate	3	100.0	0	.0	14.37	0.001*
Secondary	57	35.2	105	64.8		
University	23	20.2	91	79.8		
Father Occupation						
Professional	19	19.2	80	80.8		
Employee	16	35.6	29	64.4		
Craftsman	18	26.5	50	73.5	21.969	0.001*
Technician	4	20.0	16	80.0		
Worker	26	55.3	21	44.7		
Mother education						
Illiterate	11	45.8	13	54.2	10.86	0.004*
Secondary	60	33.3	120	66.7		
University	12	16.0	63	84.0		
Mother occupation						
Housewife	52	38.2	84	61.8	12.75	0.005*
Professional	12	16.0	63	84.0		
Employee	19	29.2	46	70.8		
Worker	0	.0	3	100.0		
Family income						
Not enough	59	40.1	88	59.9		
Enough	20	20.9	76	79.2	17.224	0.001*
Enough and more	4	11.1	32	88.9		
Residence						
City	0	.0	15	100.0	6.71	0.01*
Village	83	31.4	181	68.6		
Self esteem						
Low self-esteem	59	39.3	91	60.7		
Moderate self-esteem	17	27.0	46	73.0	18.4	0.001*
High self-esteem	7	10.6	59	89.4		

χ 2 Chi square test non-significant $p \geq 0.05$ *$p < 0.05$: significant

Table (3): logistic regression of significant predictors of dishonesty among adolescents

Dishonesty	Univariate logistic regression				Multivariate logistic regression			
	Sig.	Exp(b)	95% c.i.for exp(b)		Sig.	Exp(b)	95% c.i.for Exp(b)	
			Lower	Upper			Lower	Upper
Male	.001	3.1	1.742	5.431	.001	3.789	1.892	7.588
Father occupation professional	Reference							
Employee	.036	2.323	1.055	5.114	.601	.746	.249	2.237
Craftsman	.267	1.516	.727	3.162	.031	.279	.087	.892
Technician	.933	1.053	.316	3.510	.005	.098	.019	.504
Worker	.0001	5.2	2.433	11.171	.327	.514	.136	1.942
University mother education	Reference							
Illiterate mother education	.004	4.4	1.613	12.231	.813	1.189	.284	4.989
Secondary mother education	.006	2.6	1.316	5.237	.464	1.467	.527	4.083
Family income (high& enough)	Reference							
Family income is not enough	.003	5.4	1.802	15.961	.004	8.585	1.977	37.285
Family income enough	.205	2.1	.666	6.650	.354	1.830	.509	6.574
High self-esteem	Reference							
Low self-esteem	.0001	5.5	2.337	12.776	.0001	6.651	2.647	16.711
Moderate self-esteem	.020	3.1	1.192	8.143	.106	2.391	.830	6.888
Constant					.016			

Hosmer and Lemeshow Test p=0..445Exp(β): odds ratio , 95% confidence level, you can be 95% confident that the confidence interval contains the value of the odds ratio for the population.

DISCUSSION

Academic dishonesty among adolescent school students is a growing prevalence that encompasses a range of unethical practices, including cheating on exams, plagiarism, copying homework, and using unauthorized resources. Numerous studies have reported instances of academic dishonesty at various schools and universities.

Our study aligns with the findings of [10] **Anitha and Sundaram (2021),** the prevalence of cheating behavior through faculty observation, student focus group discussions, and a self-reporting questionnaire. Faculty estimated cheating rates at 65%, 40%, and 80% across three groups, while student focus groups reported perceived rates of 90%, 70%, 80%, and 60%. The self-reporting questionnaire revealed that 93.4% of students admitted to engaging in some form of academic dishonesty. Similarly, according to a study conducted in Pakistan, several factors, including stress, family pressure to succeed, and fear of failing, contribute to student cheating. [12].

In contrast, according to [13] **Bylieva et al. (2020),** the main types of academic dishonesty involve actions such as cheating, plagiarism, submitting the same work multiple times, providing false information, getting unauthorized assistance during exams, engaging in academic misconduct, and showing a lack of authentic interest in the subject matter.

A combination of psychological, social, and systemic factors contributes to the increase in AD among school students. Sociodemographic characteristics such as gender, parental education and occupation, income, and place of living were found to be

statistically significantly correlated with dishonesty in our study. [14]

According to our research, male students were 3.1 times more likely than female students to commit dishonesty, supported by more extensive behavioral data: a study published in Frontiers in Psychology revealed that men were more likely to act dishonestly in situations where rewards were offered, but that gender differences disappeared in the absence of a reward context. [15]

However, **Eric et al. (2018)** discovered no obvious gender-based difference, although male students demonstrated a highertolerance for dishonest behavior, and female students were more likely to witness peer cheating. However, female students were more likely than males to report witnessing a classmate copying another student's assignment, while male students tended to view academic dishonesty with greater tolerance compared to their female peers. Others showed that males are more prone to AD than females in all aspects, and academic performance [13] [16].

Family history had an impact on dishonesty as well. The likelihood of dishonesty was 5.2 times higher among adolescents whose fathers were manual laborers than among those whose fathers were professionals. Adolescents with mothers who were illiterate or only had a secondary education were also 4.4 and 2.6 times more likely to act dishonestly, respectively, according to maternal education. These findings support those of **Idris et al.** (2020), who found a correlation between improved academic achievement and moral behavior and higher parental education [17].

Another important predictor was family income. Compared to students from wealthier homes, those from low-income families were 5.4 times more likely to commit dishonesty. According to **Macaulay** (2015) and **Asgher et al.** (2023), socioeconomic difficulties are a major contributing factor to academic misconduct among students. Additionally, **Zahra** (2021) emphasized that students who are struggling financially might work part-time, which would reduce their study time and increase their risk of academic dishonesty. [18][19][20]

Self-esteem was found to be a key factor. Adolescents with poor self-esteem were 5.5 times more likely to engage in dishonest activity, whereas those with moderate self-esteem were 3.1 times more likely to do so. This is consistent with previous studies from the Philippines and Iran, which identified a link between higher rates of cheating and low self-esteem [21] [22]. While low self-esteem is associated with poor results, high self-esteem has long been associated with greater academic performance, moral decision-making, and resilience. [23]

In Egypt, students were roughly 1.27 times more likely to cheat if they were male, and 78% of them thought that parental pressure on exam performance increased cheating rates compared to roughly 56% in Saudi Arabia and roughly 70% in Jordan, students. [24]

Our study has limitations. It can only demonstrate association, not causation, because it is cross-sectional. Additionally, it was only conducted in one district, which may limit its generalizability. Furthermore, bias may be created by the questionnaires' self-report nature, especially in sensitive areas such as dishonesty.

Conclusion:

Dishonest discipline, with its different aspects, is a frequent social problem that should be paid sufficient attention. Male gender, low family income, and lower self-esteem were predictors of dishonesty among adolescents. A family physician, as a care provider who deals with all aspects of health, should screen adolescents for dishonesty and communicate with

community leaders to design a campaign addressing this ethical issue.

Conflict of Interest: The authors declare that they have no conflict of interest.

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Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' Contributions

Dr. Amany M. Abdallah: Conceptualization, study design, data analysis, manuscript review.

Dr. Asmaa G. Mohamed: Data collection, statistical analysis, manuscript drafting, corresponding author.

Dr. Nahla A. Zaitoun: Supervision, manuscript editing, final approval of the version to be published.

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