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**PARENTAL ALCOHOL USE AND ITS ASSOCIATION WITH EMOTIONAL WELL-BEING AND
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PAPUA NEW GUINEA**

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PARENTAL ALCOHOL USE AND ITS ASSOCIATION WITH EMOTIONAL WELL-BEING AND ACADEMIC OUTCOMES AMONG SECONDARY SCHOOL STUDENTS IN PORT MORESBY, PAPUA NEW GUINEA

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ABSTRACTS

Parental alcohol use is a growing public health concern with significant implications for the emotional well-being and academic performance of children and adolescents. Evidence from Pacific Island countries, including Papua New Guinea (PNG), remains limited. A cross-sectional study was conducted among 109 upper secondary school students in Port Moresby. Data were collected using a structured self-administered questionnaire assessing parental alcohol use, parental involvement, home environment, emotional outcomes, and academic performance. Descriptive statistics, Fisher's exact test, and binary logistic regression analyses were performed to examine associations between household factors and learning and concentration difficulties. Nearly 70% of students reported parental alcohol use, and approximately three-quarters indicated minimal or no parental involvement in their education. Emotional distress was reported by 66.1% of participants, while over two-thirds demonstrated poor to average academic performance. Logistic regression analysis showed that lack of parental guidance and support substantially increased the likelihood of learning and concentration difficulties (OR = 5.184, $p = 0.002$), while an unconducive home environment was associated with nearly four times higher risk (OR = 3.646, $p = 0.034$). Family conflict was not statistically significant ($p > 0.05$). The findings highlight the critical role of parental engagement and supportive home environments in shaping students' emotional health and academic outcomes. Family-centred interventions that strengthen parental involvement and address alcohol-related household instability are essential for improving educational outcomes among adolescents in PNG.

Keywords: Parental alcohol consumption, Academic performance, Emotional wellbeing, Parental involvement, Secondary school students, Papua New Guinea.

INTRODUCTION:

Harmful alcohol consumption remains a major public health challenge globally, with significant implications for family wellbeing and children's educational pathways. The World Health

Organization (WHO) [1] identifies excessive drinking as a driver of emotional distress, financial instability, and disrupted home environments factors that collectively undermine children's academic success. International evidence consistently shows that children living

with alcohol-dependent parents face higher risks of absenteeism, concentration difficulties, behavioural challenges, and reduced academic performance [2,3]. These effects are observed in both developed and developing countries, contributing to long-term socio-economic disadvantage [1].

Research from diverse settings also highlights the pathways through which parental alcohol use affects schooling. Emotional distress, neglect, and household instability have been linked to poor cognitive development and increased dropout rates among affected children [2]. Large-scale longitudinal studies from Europe and North America demonstrate that parental alcohol misuse is associated with lower educational attainment, poorer school adjustment, and diminished academic self-concept [4,5]. Other studies report increased conduct problems, impulsivity, aggression, truancy, and higher disciplinary actions among children raised in alcohol-impacted households [6,7,8]. Self-esteem, confidence, and school satisfaction may also decline, especially when children experience stigma, unpredictability, and limited emotional support at home [9,10,11].

Within the Pacific region and Papua New Guinea (PNG), alcohol misuse is a growing public health and social concern. In urban areas such as Port Moresby, parental drinking is frequently linked to domestic violence, financial strain, and child neglect are conditions that

directly hinder children's educational participation and achievement [12,1]. PNG-based studies, though limited, suggest that students affected by alcohol-related household stress face greater school absenteeism, behavioural difficulties, and reduced academic performance. Economic hardship arising from parental alcohol consumption can also lead to the diversion of household resources away from education, resulting in inadequate school materials and missed learning opportunities [13]. Moreover, the psychological toll on students in the National Capital District (NCD) is substantial. Exposure to alcohol-dependent parents may lead to stress, anxiety, depression, social isolation, and reduced academic motivation [4,14,15]. These emotional burdens frequently manifest as low self-esteem and disruptive behaviours, further increasing the risk of academic underachievement [1].

In PNG, however, existing literature focuses primarily on youth alcohol consumption rather than parental drinking. Studies have shown that secondary students often engage in alcohol use due to stress, peer influence, and social behaviours, contributing to absenteeism and declining academic performance [16]. Broader national reports document alcohol's harmful impact on families and communities, which indirectly affects children's education [17]. Policy frameworks within the PNG Department of Education provide guidance on managing student behaviour, yet little emphasis is placed

on addressing the effects of parental alcohol misuse on children's learning [18]. Importantly, there are no official National Statistical Office (NSO) reports detailing the relationship between parental alcohol use and student academic outcomes in PNG, illustrating a critical knowledge gap.

Given the lack of localized evidence, there is an urgent need to examine how parental alcohol consumption affects students particularly those in upper secondary schools. This study aims to address this gap by examining the impact of parental alcohol consumption on the academic performance and overall educational outcomes of upper secondary school students in NCD, Port Moresby, PNG.

METHODOLOGY:

Study site and population: Morata Two located within the Moresby North-West Electorate in NCD, Port Moresby, PNG, was selected as the study site, due to its urban characteristics and documented exposure to social pressures, including alcohol use within households. Morata Two is estimated to have a population of approximately 18,000 – 22,000 residents (based on demographic estimates from the National Capital District Commission's urban settlement profiling reports and community assessments conducted between 2016 and 2020), making it one of the most densely populated urban settlements in the city [19,20].

The study was conducted among upper secondary school students (students enrolled in Grades 9-12) who lived in Morata Two, but attending schools. Eligibility criteria included current enrolment at the school and willingness to participate. Students who were absent during data collection or declined consent were excluded.

Study design and sampling: This study employed a descriptive cross-sectional study design, enabling the assessment of parental alcohol consumption and its perceived effects on students' academic performance at a single point in time, providing a snapshot of students' academic experiences. As a descriptive study, the emphasis was on documenting the prevalence of parental alcohol use and characterising its influence on students' attendance, academic achievement, behaviour, and overall school engagement.

A non-probability sampling method, specifically convenience sampling, was used to recruit participants. This approach was practical for accessing students who were available during the study period and willing to participate, particularly within communities where household alcohol use is known to be common. While convenience sampling does not ensure statistical representativeness, it is appropriate for descriptive studies seeking to gather timely, firsthand information from individuals directly affected by the issue under investigation.

Sample size: A total of 109 secondary school students living in Morata Two and attending various upper secondary schools in NCD were recruited in the study. This sample size was considered appropriate as it enabled the capture of diverse perspectives across grade levels, socio-economic backgrounds, and residential settings, while remaining feasible within the study's logistical constraints of the study, including time, school schedules, and participant availability.

Although not intended to be representative of all students in NCD, the sample provided sufficient variability to identify meaningful patterns in academic performance, attendance, and emotional or behavioural outcomes associated with parental alcohol use in a high-risk urban context.

Study variables: This study focused on two primary variables:

Independent variables: Parental alcohol use, parental involvement, home environment, family conflict,

Dependent or Outcome variables: Emotional distress, academic performance, academic satisfaction, academic confidence, learning and concentration difficulties.

These variables were chosen to better understand how alcohol use at home affects students' learning and behaviour at school. The

students involved in the study lived in Morata Two but attended various schools in NCD.

Data collection tool: Data were collected using a structured, self-administered questionnaire, developed based on validated instruments from previous studies on parental alcohol use, emotional well-being, and academic outcomes [8,22,24]. The questionnaire captured: Socio-demographic characteristics, parental alcohol use, parental involvement in education, emotional well-being, academic performance, satisfaction, and confidence. The instrument was pre-tested among a small group of students from a different school to ensure clarity and relevance.

Questionnaires were distributed during school hours in classrooms designated by school administrators to ensure convenience and confidentiality. Students were briefed on the purpose of the study and assured that their responses would remain anonymous. Teachers were present only to assist with logistics and did not participate in the data collection process, helping to ensure honest and unbiased responses.

Data management and statistical analysis: All completed questionnaires were checked for completeness before data entry. Responses were coded and entered into IBM SPSS (Statistical Package for the Social Sciences) Statistics software version 22 [21]. Data

cleaning included consistency checks and exclusion of cases with missing information to ensure data quality. Data were analysed using IBM SPSS Statistics.

Univariate analysis was conducted to describe the distribution of study variables. Frequencies, and percentages were generated to summarise student demographics, parental alcohol use, academic performance, attendance, and behavioural indicators.

Bivariate analysis examined associations between parental alcohol consumption (independent variable) and students' educational outcomes (dependent variables). Cross-tabulations were performed, and Fisher's Exact Test was used to examine associations between categorical variables due to small cell sizes.

A binary logistic regression analysis was conducted to assess the influence of family-related factors on students' learning and concentration difficulties. The outcome variable was learning and concentration difficulties (Yes = 1, No = 0). Predictor (Independent) variables included lack of parental guidance and support, lack of a conducive home environment, and family conflict. Odds ratios (ORs) with 95% confidence intervals (CIs) were calculated to estimate the strength and direction of associations, allowing for adjustment of potential confounders. Statistical significance was set at $p \leq 0.05$.

Together, these analytical approaches provided a comprehensive assessment of both descriptive patterns and predictive relationships underlying the impact of parental alcohol consumption on secondary school students in Morata Two.

Ethical clearance: Ethical approval was obtained from the University of Papua New Guinea (UPNG), School of Medicine and Health Sciences (SMHS) Ethics Committee. All procedures adhered to institutional ethical standards. Written informed consent was obtained from all participants, and participation was voluntary, with the right to withdraw at any time.

RESULTS:

A total of 140 questionnaires were distributed to students across the selected upper secondary schools. Of these, 109 questionnaires were fully completed and returned, while 31 were not returned or were incomplete, resulting in a response rate of 77.9% (109/140). The results obtained in this study are presented in the Tables below.

Participant Characteristics:

Of the 109 participants, 59.6% were female and 40.4% male (Table 1). More than half were aged 15–20 years, with most enrolled in Grades 11 and 12, reflecting a predominantly senior secondary school population.

Parental Alcohol Use and Involvement:

A substantial majority (69.7%) reported parental alcohol use. Parental involvement in education was generally low, with over 75% of students reporting minimal or no parental engagement (Table 1).

Emotional and Academic Outcomes:

Emotional distress was reported by 66.1% of students. Academic performance was predominantly poor to average, while levels of academic satisfaction and confidence were generally low (Table 1).

Associations Between Parental Alcohol Use and Educational Factors:

A statistically significant association was observed between parental alcohol use and parental involvement (Table 2; $p < 0.001$), indicating lower educational engagement among parents who consumed alcohol.

Parental alcohol use was also strongly associated with emotional distress (Table 3; $p < 0.001$). Nearly all emotionally affected students reported parental alcohol use.

Academic Performance and Satisfaction:

Academic performance was significantly associated with parental alcohol use (Table 4; $p < 0.001$). Students from alcohol-free households were more likely to report good or excellent performance, whereas those from alcohol-affected households predominantly reported average or poor performance.

Similarly, parental involvement was significantly related to academic satisfaction (Table 5; $p < 0.001$), with higher satisfaction reported among students whose parents were actively engaged in their education.

Table 1. Univariate analysis of demographic characteristics of study participants (n=109)

Variable	Frequency (n)	Percent (%)
Gender		
Male	44	40.4
Female	65	59.6
Age group (Years)		
15-20	58	53.2
21-25	28	25.7
26-30	16	14.7
>30	7	6.4
Education (Grade)		
Grade 9	18	16.5
Grade 10	22	20.2
Grade 11	34	31.2
Grade 12	35	32.1

Parental alcohol use		
Yes	76	69.7
No	33	30.3
Parental involvement in child's education		
Very involved	27	24.8
Minimally involved	38	34.9
Not involved at all	44	40.3
Emotional outcomes		
Yes	72	66.1
No	37	33.9
Academic performance		
Excellent	10	9.2
Good	27	24.7
Average	34	31.2
Poor	38	34.9
Academic satisfaction		
Completely satisfied	21	19.3
Partly satisfied	45	41.3
Not satisfied at all	43	39.4
Academically confident		
Very confident	16	14.7
Confident	17	15.6
Neutral	37	33.9
Not confident at all	39	35.8

Table 2. A bivariate analysis of association between parental involvement in education and parental alcohol use (n=109).

Parental Involvement	No Alcohol Use n (%)	Alcohol Use n (%)	Total n (%)	χ^2 value	p-value
Very involved	27 (100)	0 (0)	27 (100)	92.44	< 0.001
Minimally involved	6 (15.8)	32 (84.2)	38 (100)		
Not involved at all	0 (0)	44 (100)	44 (100)		
Total	33 (30.3)	76 (69.7)	109 (100)		

Significance level at $p \leq 0.05$

Table 3. Association Between Parental Alcohol Use and Students' Emotional Outcomes (n=109).

Emotionally Affected	No Alcohol Use n (%)	Alcohol Use n (%)	Total n (%)	χ^2 value	p-value
No	33 (89.2)	4 (10.8)	37 (100)	88.61	< 0.001
Yes	0 (0.0)	72 (100)	72 (100)		
Total	33 (30.3)	76 (69.7)	109 (100)		

Significance level at $p \leq 0.05$

Table 4. Association Between Parental Alcohol Use and Students' Academic Performance (n=109).

Academic Performance	No Alcohol Use n (%)	Alcohol Use n (%)	Total n (%)	χ^2 value	p-value
Excellent	10 (100.0)	0 (0.0)	10 (100)	90.13	< 0.001
Good	22 (81.5)	5 (18.5)	27 (100)		
Average	1 (2.9)	33 (97.1)	34 (100)		
Poor	0 (0.0)	38 (100.0)	38 (100)		
Total	33 (30.3)	76 (69.7)	109 (100)		

Significance level at $p \leq 0.05$ **Table 5: Association between academic satisfaction level with parental involvement (n=109)**

Academic Satisfaction	Very Involved n (%)	Minimally Involved n (%)	Not Involved at All n (%)	Total n (%)	χ^2 value	p-value
Completely Satisfied	17 (81.0)	3 (14.3)	1 (4.8)	21 (100)	50.08	<0.001
Partially Satisfied	10 (22.2)	16 (35.6)	19 (42.2)	45 (100)		
Not Satisfied at All	0 (0.0)	19 (44.2)	24 (55.8)	43 (100)		
Total	27 (24.8)	38 (34.9)	44 (40.4)	109 (100)		

Significance level at $p \leq 0.05$ *Emotional Well-being and Academic Confidence:*

A strong association was found between emotional distress and academic confidence (Table 6; $p < 0.001$).

Emotionally affected students were substantially more likely to report low confidence in their academic abilities.

Predictors of Learning and Concentration Difficulties:

Binary logistic regression analysis (Table 7) identified lack of parental guidance and support as the strongest predictor of learning and concentration difficulties (OR = 5.18, 95% CI: 1.86–14.56, $p = 0.002$). An uncondusive home environment also significantly increased the likelihood of difficulties (OR = 3.65, 95% CI: 1.11–12.02, $p = 0.034$). Family conflict was not a significant predictor ($p = 0.933$).

Table 6: Association between Academic confident levels and emotional outcome (n=109).

Confidence in Academic Success	Not Emotionally Affected n (%)	Emotionally Affected n (%)	Total n (%)	χ^2 value	p-value
Very Confident	16 (100.0)	0 (0.0)	16 (100)	88.61	< 0.001
Confident	16 (94.1)	1 (5.9)	17 (100)		
Neutral	3 (8.1)	34 (91.9)	37 (100)		
Not Confident at All	2 (5.1)	37 (94.9)	39 (100)		
Total	37 (33.9)	72 (66.1)	109 (100)		

Significance level at $p \leq 0.05$ **Table 7. Binary logistic regression of three family-related factors, lack of parental guidance and support, lack of a conducive environment at home, and family conflict on students' learning and concentration difficulties.**

Predictors (Independent variables)	Odds Ratio (95% CI)	P-value
Family conflict (Yes vs No)	0.95 (0.30–3.05)	0.933
Lack of conducive environment at home (Yes vs No)	3.65 (1.11–12.02)	0.034
Lack of parental guidance and support (Yes vs No)	5.18 (1.856–14.56)	0.002
N	109	—

Footnote: OR = Odds Ratio, CI = Confidence Interval. No – Reference group for each predictor.

DISCUSSION:

This study demonstrates clear associations between parental alcohol use, parental involvement, emotional well-being, and academic outcomes among upper secondary school students in Morata Two. The higher proportion of female participants (Table 1) is noteworthy, as existing evidence suggests that girls are more likely to internalize stress in response to household adversity, whereas boys tend to externalize distress [22,23]. These gendered coping patterns may influence

emotional regulation and academic engagement in alcohol-affected households.

Most participants were in late adolescence and senior secondary grades, a developmental stage marked by heightened academic demands and emotional sensitivity. Prior studies identify adolescence as a critical period during which exposure to parental alcohol use adversely affects emotional well-being, academic motivation, and behavioural adjustment [24-26]. Older students may also be

more aware of family dynamics and better able to recognize their effects on learning [8].

Parental alcohol use was highly prevalent in the study population (Table 1), consistent with global patterns [27]. This was accompanied by low levels of parental involvement in education, reinforcing evidence that alcohol misuse impairs parental functioning and reduces engagement in children's schooling [4,28,29]. The significant association ($p < 0.05$) between parental alcohol use and parental involvement (Table 2) suggests that alcohol-related impairment limits emotional availability, supervision, and academic support at home [35,36].

Emotional distress was common among students from alcohol-affected households, and our findings revealed a strong association (Table 3; $p < 0.001$) between parental alcohol use and emotional distress, aligning with research showing increased risks of anxiety, emotional instability, and psychological distress among children of alcohol-dependent parents [30]. Emotional distress is known to impair concentration, academic confidence, and engagement with learning [31], and in this study, it coincided with predominantly low to moderate academic performance (Table 4; $p < 0.001$). Similar patterns have been widely reported, including higher risks of poor performance and grade repetition among children of alcohol-dependent parents [8,32].

Students' academic satisfaction further reflected these challenges. Those reporting low parental involvement were significantly more likely to be dissatisfied with their academic experience and this is consistent with evidence that children from alcohol-affected households often develop negative attitudes toward school [11].

In contrast, students with highly involved parents reported greater academic satisfaction, highlighting the protective role of parental engagement [37,38]. Similarly, our findings show that parental involvement was significantly linked to academic satisfaction (Table 5; $p < 0.001$), with higher satisfaction reported among students whose parents were actively engaged in their education.

Academic confidence was also strongly associated with emotional well-being (Table 6, $p < 0.001$). Students experiencing emotional distress were significantly more likely to report low academic confidence, supporting evidence that diminished self-esteem and unstable home environments undermine academic self-concept among children of alcohol-dependent parents [33,34].

Multivariate analysis (Table 7) identified lack of parental guidance and support as the strongest predictor of learning and concentration difficulties (OR = 5.18, 95% CI: 1.86–14.56, $p = 0.002$), while an uncondusive home environment also significantly increased risk (OR = 3.65, 95% CI: 1.11–12.02, $p = 0.034$).

Family conflict was not a significant predictor (OR = 0.95, 95% CI: 0.30–3.05, $p=0.933$), suggesting that the absence of consistent support, structure, and emotional stability may have a more immediate impact on learning than conflict alone. This finding aligns with evidence that weakened parent-child relationships mediate the effects of parental substance use on academic achievement [39], and that environmental stressors further exacerbate learning difficulties [40].

Overall, the findings indicate that parental alcohol use undermines students' emotional well-being and academic success primarily through reduced parental involvement, emotional distress, and unstable home environments. Students with involved, non-drinking parents demonstrated greater emotional stability, academic confidence, satisfaction, and performance. These results are consistent with existing literature [24,22,8] and underscore the need for family-centred and school-based interventions that strengthen parental engagement, improve home environments, and provide targeted emotional and academic support for students living in alcohol-affected households.

Limitations of the study:

Study limitations include the cross-sectional design, which limits the ability to establish causal relationships between variables. The relatively small sample size may further restrict

the generalisability of the findings. Data were based on self-reported student perceptions, which may be influenced by recall or social desirability bias, particularly when addressing sensitive issues such as parental alcohol use. The absence of parental perspectives limits a more comprehensive understanding of parental behaviours and educational engagement. Additionally, data were collected from a single geographic area in PNG, and the findings may not reflect experiences in other regions or cultural contexts.

Despite these limitations, the findings offer valuable evidence to inform policy, school-based support systems, and family-focused interventions aimed at improving student well-being and educational outcomes.

CONCLUSION:

This study demonstrates a clear association between parental alcohol use and poorer emotional wellbeing and academic performance among students in Morata two. Students from alcohol-affected households were more likely to experience anxiety, reduced academic confidence, and learning difficulties, while those with involved, non-drinking parents showed greater emotional stability and academic success. The findings align with existing literature and highlight the critical role of parental guidance and a supportive home environment in shaping students' educational outcomes.

Overall, the results emphasise the need for family-centred interventions and support systems to address alcohol-related harm and promote healthier home environments that enable students to achieve their full academic potential. Given the limited local data, more research should be conducted to explore the long-term effects of parental alcohol use on student development in PNG. This will help inform culturally relevant interventions and policies.

Recommendations:

Targeted interventions are needed to reduce the impact of parental alcohol use on students' emotional and academic well-being. Parental education programs should be strengthened to raise awareness of the effects of alcohol use on children's development and school performance. Schools should enhance counselling and mental health services to provide early emotional and academic support for affected students. Greater family engagement should be promoted through regular parent-teacher communication and home-based learning support. Students from alcohol-affected households may benefit from targeted academic and resilience-building interventions.

At the policy level, collaboration among educators, health professionals, and policymakers is essential to strengthen regulation of alcohol availability, particularly in

residential areas. Further research in PNG is recommended to inform culturally appropriate, evidence-based interventions.

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