The Influence of Peer Groups, Social Media Advertisements, Preventive Policies of the School of Origin and Personal Religiosity on the Level of Exposure to Online Gambling in New Students of Muhammadiyah Universities in Greater Jakarta

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Abstract

This research is motivated by the limited studies on online gambling exposure among high school graduates entering college, despite its significant impact on adolescent behavior and mental health in Indonesia. The study aims to measure exposure levels and examine the effects of two risk factorsgambling advertising on social media and peer association and two protective factors preventive school policies and personal religiosity among new students at Muhammadiyah Universities (PTM) in Greater Jakarta. Using a quantitative approach, the study involved 584 first-year students selected through simple random sampling from four PTMs: UMJ, UHAMKA, UMT, and UMBARA. Data were collected via an online questionnaire employing the Problem Gambling Severity Index (PGSI) and researcher-developed Likert scales, then analyzed using binary logistic regression. Results revealed that 18.8% of respondents had varying levels of exposure to online gambling. Logistic regression showed significant influences: gambling advertising (OR = 9.14) and peer association (OR = 7.00) increased risk, while preventive school policies (OR = 0.52) and high religiosity (OR = 0.36) reduced risk. Interaction effects between risk and protective factors were not significant, indicating that each factor operated consistently across respondent categories. These findings align with Problem Behavior Theory and highlight the protective roles of religiosity and school policies. The study concludes that online gambling exposure is shaped strongly by digital and social environments, whereas religious values and institutional policies act as safeguards. The implications include theoretical contributions to PGSI adaptation in Indonesia and practical recommendations for policymakers and educators to strengthen preventive interventions, enforce policies, and promote religious values.

Keywords: **Online Gambling; Problem Behavior Theory; Binary Logistic Regression**

1. INTRODUCTION

A major challenge in education management research the scientific study of planning, organizing, directing, and controlling human or material resources in an educational environment is how to explain, predict, and control the behavior of all parties involved in the education unit in the midst of changes in human behavior caused by the rapid and massive use of information technology (IT) since the COVID-19 pandemic around the world. During the three years of the pandemic, all education systems centered on face-to-

face activities have been paralyzed around the world and all those involved in the education process—in primary, secondary, and higher education units—learn to use IT to keep the education process going. It can be said that the transformation towards information tools that Alfin Tofler predicted in his book Future Shock (first published in 1970, reissue 2022) has accelerated due to the COVID-19 pandemic because the use of IT has become the main channel not only in the world of education but in all aspects of social life, economics, politics, government, to entertainment and gambling. However, along with that, the human need for entertainment during the pandemic has been read as an opportunity for the games and online gambling industry (Critchlow, et al., 2023; Sirola, et al., 2023) which are now growing rapidly with a very high risk of exposure and addiction for all ages, education levels, and levels of society. Online gambling has become a pandemic that is difficult to control so it threatens the achievement of national education goals. How students can be exposed to online gambling, how schools or colleges mobilize the resources available to overcome it, and how the role of religious teachings to stem it, require a serious study from the perspective of Islamic education management research.

Online gambling has become a pandemic in Muslim-majority Indonesia. As reported by CNBC Indonesia, (10/8/2023) the Minister of Communication and Information stated that for one online gambling site called Higgs Domino Island, the losses of Indonesian citizens reached 2.2 trillion rupiah per month or 27 trillion rupiah per year). From 2018 to August 22, 2022, Kominfo has terminated access to 566,332 content in digital spaces that have gambling elements, including digital platform accounts and sites that share content related to gambling activities. However, the latest report submitted by the Head of the Center for Financial Transaction Reporting and Analysis (PPATK) to the House of Representatives of the Republic of Indonesia, said that there are 1000 members of the House of Representatives, DPRD, and the secretariat of the Secretary General playing online gambling with more than 65 thousand transactions in total and a turnover of 25 billion for each institution (DetikNews, 26/6/2024). This means that online gambling continues to flourish until it permeates the highest layers of society in even the most respectable institutions.

The challenges faced in eradicating online gambling are so big, because once a site or application is taken down by Kominfo, it will appear again with a new IP address. The arrest of operators as far as those operating in Indonesia can be carried out by the police, for example, the raid of 88 Chinese foreigners online gambling operators in Batam (Antara, 30/8/2023) will be very difficult if they are abroad where the number is much larger. Sadly, according to a UN report, foreign operator workers who may be Indonesian, such as in Laos, Myanmar, the Philippines, and Thailand, are also actually trapped as victims of human trafficking (Herald, 10/8/2023). Based on an investigation into Indonesian migrant workers who were victims of human trafficking in Batam and were employed as online gambling operators in Cambodia, the Head of the Indonesian Migrant Workers Protection Agency (BP2MI) admitted that he had reported the figure of T as an online gambling controller in a meeting at the State Palace in the presence of President Jokowi, the Commander of the Indonesian Armed Forces, and the National Police Chief. Asked by reporters, President Jokowi admitted that he did not know who the figure in question was, and the head of BP2MI himself changed his confession after being summoned by the National Police Headquarters

(Tempo, 29/7/2024). All of this hints that online gambling is controlled by a mafia that is feared by republican elites so that it is increasingly difficult to eradicate.

It is only the community itself that must take the initiative to overcome the online gambling pandemic, which is certainly the main concern of the world of education because the school-age group is the most vulnerable to being exposed to online gambling. There is a lot of news about criminal acts due to online gambling addiction involving students, students, and even teachers. For example, the murder of a student by his upclassmen who was entangled in a loan debt of 80 million due to addiction to online gambling on the UI Depok campus (Kompas, 6/8/2023), the theft of four students to play online gambling in Lombok (Lombok Pos, 10/7/2023), the repeated theft of wedding party envelopes by high school students in Lampung to play online gambling (TribunNews, 18/7/2023), the virality of a group of high school students in Lampung playing online gambling at school due to the teacher's negligence in allowing free hours (Jurnal Kota, 22/8/2023), misappropriation of BOS funds of 350 million by a former high school principal in Palembang due to online gambling addiction (Suara Sumsel, 5/7/2022).

As far as searching through the internet, there has been no news of incidents of criminal behavior due to online gambling addiction from Islamic school students or Islamic university students. However, that does not mean that Islamic school or college institutions are immune from online gambling exposure. In an interview with a resource person, a lecturer colleague of Muhammadiyah University (hereinafter PTM) in Jakarta, as far as he knows, there are quite a lot of students who are involved in online gambling on their campus. Even his cousin who studied in his own village has been so addicted to online gambling that he often lied and once stole to bet on online gambling. All ways have been tried to give advice but have not succeeded, so the family just gives up while still hoping that the child will change on his own later. From the description above, it can be seen that online gambling has become an alarming phenomenon because it has involved students and college students. Even more worrying, there are already some of them with severe addiction levels, so they commit minor or severe criminal acts to fulfill their desire to play online gambling. Therefore, it is important to conduct research on the level of application or the level of addiction to online gambling among Indonesian students or students today.

Scientific publications on online gambling in Indonesia so far have only contained literature reviews (e.g. by Addiyansyah et al., 2023; Mustaqilla et al., 2023; Larasa et al., 2024). The empirical research by Aprilia et al (2023) did not use a clear measurement of the "addiction tendencies" of online gambling studied, so the results were inconclusive. Empirical research has not been found using standard measurements, so we do not know how widespread and how severe the level of online gambling addiction in Indonesia is today. Indeed, the clinical features of gambling addiction were only included in the DSM-III Diagnostic and Statistical Manual of Mental Disorders, published by the American Psychological Association in 1980, and continued to be developed until the DSM-V in 2010. Gambling research experts absorbed some of the key DSM indicators for use in gambling research such as the South Oaks Gambling Screen (SOGS) from Lesieur & Blume (1987) and the Problem Gambling Severity Index (PGSI) from Ferris & Wynne (2001). This study

will adapt PGSI to be used to measure how severe online gambling exposure is in the research sample. By adopting measurements that are commonly used by gambling researchers in the international world, of course this research will fill the gap in the research on the phenomenon of gambling and online gambling addiction in the country. In addition to measuring the level of addiction itself, it is also necessary to conduct research on important variables that can plunge adolescents into online gambling addiction and variables that can prevent it. A theoretical approach commonly used in developmental psychology, namely Problem Behavior Theory (PBT), focuses on research on problematic behavior in adolescents, with predictors of variables that can be straightened out called moderate risk factors and variables that can prevent so-called protective factors (Jessor, 2014).

This school policy is important, considering that research results show that school can be a protective factor that can prevent students from getting involved in gambling. Research in Sweden found that increased school ethos, values, and norms were associated with reduced student involvement in gambling (Låftman et al. 2020), strong principal's leadership and purposeful building ethos were also associated with low gambling involvement among high school students (Olsson et al. 2021). Another study in the United States found that leaving school play areas for gambling games was associated with an increase in pathological gambling behavior and permissive attitudes toward gambling among students (Foster et al. 2015). For Indonesia, as far as searching, empirical research has not been found on the effect of school policies on the prevention of gambling among students.

It is necessary to explore the role of religiosity as a protective factor for adolescents not to engage in online gambling. This is evidenced by the negative relationship between religiosity and gambling involvement among adolescents, which means that the more religious they are, the less involved they are in gambling, and the less religious they are the more involved in gambling. This also applies in secular countries that are less concerned with religious teachings. For example, Casey et al. (2011) in Canada found that high religiosity was associated with low involvement in gambling in adolescents aged 13-16 years old boys and girls. The research of Calado et al. (2024) on a sample of Portuguese and British adolescents also found that high religiosity was associated with low involvement in gambling. Both studies did not include a sample of Muslim adolescents, but Ghandour and El Sayed's (2013:279) study on a sample of students in Beirut found that it turned out that Christian students were more likely to be involved in gambling than Muslim students, but the high religiosity in both student samples was associated with low involvement and gambling addiction.

For the Indonesian context, it is interesting to examine the relationship between personal religiosity and exposure to online gambling among students. As a country with a majority Muslim population that adheres to religious teachings and religious education is a compulsory lesson in all levels of education, students should have a self-defense mechanism to avoid engaging in online gambling that is prohibited by religion. The many phenomena of students involved in online gambling to the level of addiction show that religious education is still not successful in instilling a religious spirit in some of its students. A study that measures the level of religiosity of students and relates it to the level of online gambling

addiction is important as an input for the development of religious education that is more effective in shaping the religious spirit among adolescents, students, and college students.

2. IMPLEMENTATION METHOD

The study used a survey method with a retrospective approach. By survey, it means using questionnaires as a data collection instrument, while retrospective means that the data concerns current conditions and factors that affect them in the past. The retrospective survey method is commonly used in epidemiological and medical research, as well as in demographic, psychological, and sociological research. Although there was a "memory bias" in the retrospective study, it was agreed that respondents' memories were accurate over a period of one year for ordinary events (Smith, 1984). For extraordinary events that affect life, usually the accuracy of memory is still strong enough for the long term. In this study, the current condition is the severity of online gambling behavior brought by new students to PTM. Meanwhile, the influencers in the past were traced in the experience of the sample with both risk factors and both protective factors experienced in the last year in their respective high schools.

3. RESULTS AND DISCUSSION
A. Data Description
1. Overview of Online *Gambling Exposure*

The level of exposure to *online gambling* is measured by the *Problem Gambling Severity Index* (PGSI) questionnaire adapted to Indonesian. PGSI consists of 9 Likert scale statements with four answer choices. Respondents were asked how often (never, ever, often, almost always) they lost playing slots so that they spent the balance (Q34), placing bigger bets to get excited about playing slots (Q35), playing again on another day to return the lost slado (Q36), borrowing/selling something to capitalize on playing slots (Q37), feeling problems with playing slots (Q38), health problems including stress due to playing slots (Q39), criticized by others as a result of playing slots (Q40), self or family getting problems due to playing slots (Q41), feeling guilty for playing slots or the consequences (Q41). Respondents who answered were never given a score of 0, never 1, often 2, and almost always 3 then the score was calculated by summing the scores of all items summed up. The level of exposure is categorized based on the final score: 0 = non-gambler, 1-2 = low, 3-7 = medium, 8-9 =, and > 9 = gambler. The respondents' answers can be seen in Appendix 3 and categorization based on demographics in Appendix 5 while the results are extracted in Table 1.

Table 1. Gambling Exposure Level *Online* Based on Demographic Characteristics in the Sample of New Students of PTM in Greater Jakarta for the 2024/5 Academic Year

Demographics	Frequency (%) of Online Gambling Exposure					Sub Sample
	Non-gambler	Low	Keep	Tall	Gamblers	
TOTAL SAMPLE PTM	474 (81.2)	16 (2.7)	45 (7.7)	24 (4.1)	25 (4.3)	584 (100)
UMJ	117 (78.0)	5 (3.3)	17 (11.3)	7 (4.7)	4 (2.7)	150 (100)
UHAMKA	139 (91.4)	3 (2.0)	6 (3.9)	1 (0.7)	3 (2.0)	152 (100)
UMT	135 (87.7)	6 (3.9)	7 (4.5)	1 (0.6)	5 (3.2)	154 (100)
São Paulo	83 (64.8)	2 (1.6)	15 (11.7)	15 (11.7)	13 (10.2)	128 (100)
Gender						
Woman	317 (94.1)	3 (0.9)	11 (3.3)	1 (0.3)	5 (1.5)	337 (100)
Man	157 (63.6)	13 (5.3)	34 (13.8)	23 (9.3)	20 (8.1)	247 (100)
Graduated from high school (Year)						
2024	231 (84.9)	7 (2.6)	19 (7.0)	8 (2.9)	7 (2.6)	272 (100)
2023	69 (73.4)	3 (3.2)	6 (6.4)	7 (7.4)	9 (9.6)	94 (100)
2022	61 (71.8)	3 (3.5)	11 (12.9)	5 (5.9)	5 (5.9)	85 (100)
2021	71 (86.6)	3 (3.7)	5 (6.1)	1 (1.2)	2 (2.4)	82 (100)
Before 2021	42 (82.4)	-	4 (7.8)	3 (5.9)	2 (3.9)	51 (100)

Demographics	Frequency (%) of Online Gambling Exposure					Sub Sample
	Non-gambler	Low	Keep	Tall	Gamblers	
Types of High School						
SMA	258 (81.9)	8 (2.5)	20 (6.3)	16 (5.1)	13 (4.1)	315 (100)
SMK	129 (75.4)	5 (2.9)	18 (10.5)	8 (4.7)	11 (6.4)	171 (100)
MA	87 (88.8)	3 (3.1)	7 (7.1)	-	1 (1.0)	98 (100)
High School Status						
Country	212 (83.1)	7 (2.7)	18 (7.1)	9 (3.5)	9 (3.5)	255 (100)
Muhammadiyah	66 (70.2)	1 (1.1)	8 (8.5)	12 (12.8)	7 (7.4)	94 (100)
Other private	196 (83.4)	8 (3.4)	19 (8.1)	3 (1.3)	9 (3.8)	235 (100)
High School Location						
Jakarta	105 (91.3)	3 (2.6)	5 (4.3)	1 (0.9)	1 (0.9)	115 (100)
Bogor City/Kab.	114 (70.4)	3 (1.9)	17 (10.5)	16 (9.9)	12 (7.4)	162 (100)
Depok	19 (86.4)	-	1 (4.5)	1 (4.5)	1 (4.5)	22 (100)
Tangerang/Banten	150 (82.4)	10 (5.5)	10 (5.5)	5 (2.7)	7 (3.8)	182 (100)
Bekasi	21 (84.0)	-	3 (12.0)	-	1 (4.0)	25 (100)
Other	65 (83.3)	-	9 (11.5)	1 (1.3)	3 (3.8)	78 (100)

Demographics	Frequency (%) of Online Gambling Exposure					Sub Sample
	Non-gambler	*Low*	*Keep*	*Tall*	*Gamblers*	
Religion at home						
Very loose	1 (25.0)	-	-	3 (75.0)	-	4 (100)
Tends to be loose	8 (33.3)	1 (4.2)	3 (12.5)	8 (33.3)	4 (16.7)	24 (100)
Mediocre	134 (79.3)	2 (1.2)	17 (10.1)	5 (3.0)	11 (6.5)	169 (100)
Tends to be strict	227 (87.0)	9 (3.4)	15 (5.7)	4 (1.5)	6 (2.3)	261 (100)
Very strict	104 (82.5)	4 (3.2)	10 (7.9)	4 (3.2)	4 (3.2)	126 (100)

Source: SPSS Output, Appendix 5. The percentage is calculated with Excel.

Table 1. presents the frequency of gambling exposure levels *Online* based on the demographic characteristics of new students. Of the total 587 samples, 474 people (81.16%) were not exposed to gambling *Online* (non-gamblers), while 110 people (18.84%) were exposed to gambling *Online* with low (2.7%), medium (7.7%), high (9.3%), and already a gambler (4.3%). Based on the choice of PTM, the most exposed to gambling *Online* are those who choose to study at UMBARA (35.2%), followed by UMJ (22%), UMT (12.3%), and at least Uhamka (8.6%). Based on gender, 36.4% of males were exposed while females were only 5.9%. Based on the year of high school graduation, the most exposed are graduates in 2022 (28.2%), followed by graduates in 2023 (26.6%), graduates before 2021 (17.6%), graduates in 2024 (15.1%) and the least graduates in 2021 (13.4%).

Based on the type of high school, the most exposed are vocational school graduates (24.6%), followed by high school graduates (18.1%) and the least MA graduates (11.2%). Based on high school status, the most exposed are graduates of Muhammadiyah schools (29.8%), followed by graduates of public schools (16.9%) and other private graduates (16.6%). Based on the location of high schools, the most exposed are those whose schools are located in Bogor City/Regency (29.6%), followed by Tangerang/Banten (17.6%), others/outside Greater Jakarta (16.7%), Bekasi (16%), Depok (13.6%), and least Jakarta (8.7%).

Finally, respondents were also asked how to implement religion at home, with 5 choices ranging from very loose to very strict. Based on the choice of answers, the most affected were those who practiced religion at home very loosely (75%),

followed by tending to be loose (66.7%), mediocre (20.7%), very strict (17.5%), and least tending to be strict (13%). It turns out that the stricter the implementation of religion at home, the less percentage is exposed, on the contrary, the looser the more it is. But interestingly, they are very strict, more exposed (4.5%) than those who tend to be strict. Perhaps this is a warning not to be too strict in the implementation of religion at home.

2. **Overview of Peer Risk Data**

Peer risk factors were measured with 6 six-item Likert scale questions with five answer choices, how many (from almost all to none) close friends from one school (Q28) or close friends outside of school (Q29) like to play slots; how powerful (from almost always to never) cannot refuse the invitation of schoolmates (Q30) and close friends outside school (Q31) to play slots; and how many (from almost all to none) close friends of one school (Q32) and close friends outside of school (Q33) have problems with playing slots. For respondents who chose the answer "none" for the answers to Q28-Q29 and Q32-Q33, and "never" for the answers to Q30-31 were categorized as "not at risk" and the rest were "at risk" in the peer-to-peer group. The respondents' answers are in Appendix 3, while the categorization is based on demographics in Appendix 6, the results of which are extracted in one table as follows.

Table 2. Peer Risk Level Based on Demographic Characteristics in the Sample of New Students of PTM in Jabodetabek FY 2024/5

Demographics	Frequency (%) of Peer Interaction Level				Sub Sample	
	No Risk		Risky			
Total Sample	214	(36.6)	370	(63.4)	584	(100)
PTM						
UMJ	38	(25.3)	112	(74.7)	150	(100)
UHAMKA	75	(49.3)	77	(50.7)	152	(100)
UMT	49	(31.8)	105	(68.2)	154	(100)
São Paulo	52	(40.6)	76	(59.4)	128	(100)
Gender						
Woman	176	(52.2)	161	(47.8)	337	(100)
Man	38	(15.4)	209	(84.6)	247	(100)
Graduation of High School (Year)						

Demographics	Frequency (%) of Peer Interaction Level				Sub Sample	
	No Risk		Risky			
2024	108	(39.7)	164	(60.3)	272	(100)
2023	29	(30.9)	65	(69.1)	94	(100)
2022	25	(29.4)	60	(70.6)	85	(100)
2021	31	(37.8)	51	(62.2)	82	(100)
Before 2021	21	(41.2)	30	(58.8)	51	(100)
Types of High School						
SMA	123	(39.0)	192	(61.0)	315	(100)
SMK	55	(32.2)	116	(67.8)	171	(100)
MA	36	(36.7)	62	(63.3)	98	(100)
High School Status						
Country	97	(38.0)	158	(62.0)	255	(100)
Muhammadiyah	31	(33.0)	63	(67.0)	94	(100)
Other private	86	(36.6)	149	(63.4)	235	(100)
High School Location						
Jakarta	51	(44.3)	64	(55.7)	115	(100)
Bogor City/Kab.	57	(35.2)	105	(64.8)	162	(100)
Depok	9	(40.9)	13	(59.1)	22	(100)
Tangerang/Banten	59	(32.4)	123	(67.6)	182	(100)
Bekasi	12	(48.0)	13	(52.0)	25	(100)
Other	26	(33.3)	52	(66.7)	78	(100)
Religion at Home						

Demographics	Frequency (%) of Peer Interaction Level		Sub Sample	
	No Risk	Risky		
Very loose	-	4 (100)	4	(100)
Tends to be loose	4 (16.7)	20 (83.3)	24	(100)
Mediocre	64 (37.9)	105 (62.1)	169	(100)
Tends to be strict	98 (37.5)	163 (62.5)	261	(100)
Very strict	48 (38.1)	78 (61.9)	126	(100)

Source: *Ouput* SPSS, Appendix 6. The percentage is calculated with Excel.

Table 2. presents the frequency of peer-to-peer risk levels based on demographics. In general, it can be seen that out of a total of 584 respondents, 370 people (63.4%) are involved in risky peer association and 214 people (36.6) are not at risk. Men are more involved in risky associations which reaches 84.6% compared to women 47.8% or less half. Based on the choice of PTM, more than half to two-thirds of the respondents were involved in risky peer associations, with the most choosing to study at UMJ (74.7%), UMT (68.2%), UMBARA (59.4%) and the smallest Uhamka (50.7%).

Based on the year of high school graduation, in general, more than half to two-thirds of respondents are involved in peer association at risk in the last 3 years of graduation with the most graduations in 2022 reaching 70.6% and the fewest graduations before 2021 which reached 58.8%. For the type of high school, vocational school graduates are at risk of association, followed by MA and high school. For high school status, the most at risk of association are graduates of Muhammadiyah schools, followed by public schools and other private schools. In terms of the location of high schools, the ones with the most risk of association are those schools located in Tangerang/Banten and the smallest are Bekasi which is only 52% with risky associations.

Finally, based on the implementation of religion in the house, the pattern is the same as the previous variable. The looser the implementation of religion at home, the more the percentage of peer interaction is risky, on the contrary, the stricter the less. Likewise, the stricter the practice of religion at home, the greater the percentage of association without risk and vice versa, the less logical it is. Again this shows the importance of the implementation of religion in the family.

3. **Social Media Advertising Risk Data Overview**

Social media advertising risk factors were measured by three Likert scale questions regarding how often (almost never, rarely, sometimes, often, almost always) respondents encountered online gambling ads while using social media (Q25), were interested in learning about it (Q26), and how many (none, 1-3, 4-6, 7-

9, > 9 types) had tried online gambling advertised (Q27). Repsonden who answered "almost never" to questions Q25 and Q26 and "none" to questions Q27 were categorized as "not at risk" and the rest were categorized as "at risk" of being impacted by online gambling ads through social media. The respondents' answers to the questionnaire are presented in Appendix 3, categorization based on demographics in Appendix 7.

Presents the frequency of responses to risky and non-risky advertisements through social media based on the demographic category of new students. Of the total 584 samples, only 96 people (16.4%) were not at risk, and 488 people (83.6%) were at risk of being affected by online gambling advertisements on social media. The large number of respondents who use social media ads is risky, it is not surprising because online judji ads *are* so invasive to enter social media such as X, tiktok, facebook, youtube, google. Every click on google, for example, will always be met with online gambling ads so that users find it difficult to avoid just looking or reading even though they may not continue.

Based on PTM, the new students who received the most risky advertisements were those who chose to study at UMJ (87.3%), followed by Uhamka (86.8%), UMT (83.1%), and the smallest UMBARA (75.8%). The difference between PTMs is not too far, and although those who choose UMBARA have the smallest percentage of accessing risky social media ads, the fact is that they are the ones who are most exposed *to online* gambling as explained.

Furthermore, based on gender, strikingly men most often read risky ads, reaching 92.7% while women only 76.9%. Based on the year of high school graduation, those who graduated from 2021 to 2024 have the most risky advertisements, more than 80%, and those who graduated the previous year reached 74.5%. Indeed, online gambling advertising has been the most prevalent in the last three years, especially through the flexing of young millionaires who are twisted through "trading investments". No matter the type of school, school status, school location, in general it appears that about 80% of respondents access risky ads.

In fact, no matter how loose or strict the implementation of religion in general, it seems that more than 80% of new students access risky advertisements. Only the pattern is interesting, the looser the implementation of religion at home, the more risky advertisements are allowed, and the stricter the less. This once underscores the importance of practicing religion at home. However, individuals are completely autonomous to see or not see the virtual world which often tempts faith through gadgets. It is impossible for high school-age children to be controlled by their gagget applications or their activities in cyberspace. Online gambling advertisers have a thousand wits to market their products, both overtly and implicitly (now) which will appear suddenly when individuals surf the internet.

4. **Overview of Preventive Policy Data for Schools of Origin**

The preventive policy of the school of origin was measured by 6 Likert scale questions each with 3 response answers. Q43 asked respondents whether there is a written regulation in their school that prohibits slot games with three responses (none, there is not run, exists and is strictly run). It was also asked how often (often, occasionally, never) school principals/vice principals (Q45), BK teachers (Q46),

Religion teachers (Q47) gave briefings so that students did not play slots. In addition, it was also asked how often (often, occasionally, never) schools involve parents (Q48), police officers (Q49), and communication and information officers (Q50 to explain the dangers of playing slots to students. For those who answered "no" for Q43 and who answered "never" for all five questions, the rest were categorized as schools with a "low" preventive policy and those who answered the rest of the items were categorized as schools with a "high" preventive policy. The respondents' answers per item are in Appendix 3, categorized by demographics in Appendix 8, while the results are extracted in Table 3.

Table 3.   School Preventive Policy Level Based on Demographic Characteristics in the Sample of New Students of PTM in Greater Jakarta for the 2024/5 Academic Year

Demographics	Frequency (%) of School Preventive Policies				Sub Sample	
	Tall		Low			
TOTAL SAMPLE	35 3	(60. 4)	23 1	(39. 6)	58 4	(00)
PTM						
UMJ	83	(55. 3)	67	(44. 7)	15 0	(10 0)
UHAMKA	92	(60. 5)	60	(39. 5)	15 2	(10 0)
UMT	96	(62. 3)	58	(37. 7)	15 4	(10 0)
São Paulo	82	(64. 1)	46	(35. 9)	12 8	(10 0)
Gender						
Woman	18 9	(56. 1)	14 8	(43. 9)	33 7	(10 0)
Man	16 4	(66. 4)	83	(33. 6)	24 7	(10 0)
Graduation of High School (Year)						
2024	19 2	(70. 6)	80	(29. 4)	27 2	(10 0)
2023	57	(60. 6)	37	(39. 4)	94	(10 0)
2022	47	(55. 3)	38	(44. 7)	85	(10 0)
2021	39	(47. 6)	43	(52. 4)	82	(10 0)
Before 2021	18	(35. 3)	33	(64. 7)	51	(10 0)

Demographics	Frequency (%) of School Preventive Policies				Sub Sample	
	Tall		Low			
Types of High School						
SMA	186	(59.0)	129	(41.0)	315	(100)
SMK	118	(69.0)	53	(31.0)	171	(100)
MA	49	(50.0)	49	(50.0)	98	(100)
High School Status						
Country	146	(57.3)	109	(42.7)	255	(100)
Muhammadiyah	72	(76.6)	22	(23.4)	94	(100)
Other private	135	(57.4)	100	(42.6)	235	(100)
High School Location						
Jakarta	71	(61.7)	44	(38.3)	115	(100)
Bogor City/Kab.	99	(61.1)	63	(38.9)	162	(100)
Depok	12	(54.5)	10	(45.5)	22	(100)
Tangerang/Banten	114	(62.6)	68	(37.4)	182	(100)
Bekasi	16	(64.0)	9	(36.0)	25	(100)
Other	41	(52.6)	37	(47.4)	78	(100)
Religion at Home						
Very loose	3	(75.0)	1	(25.0)	4	(100)
Tends to be loose	19	(79.2)	5	(20.8)	24	(100)
Mediocre	83	(49.1)	86	(50.9)	169	(100)
Tends to be strict	159	(60.9)	102	(39.1)	261	(100)
Very strict	89	(70.6)	37	(29.4)	126	(100)

Source: *Ouput* SPSS, Appendix 8. The percentage is calculated with Excel.

Table 4.4 presents an overview of the frequency of the level of preventive policies of the school of origin based on demographic background. It appears that out of a total of 584 samples, 231 people (39.6%) came from schools with low preventive policies, and 353 people (60.4%) came from schools with high preventive policies. Based on the choice of PTM, the most likely to come from schools with low preventive policies are those who choose to study at UMJ (44.7%), followed by Uhamka (39.5%), UMT (37.7%), and the smallest UMBARA (35.9%). More women come from schools with low preventive policies than men.

Furthermore, based on the year of high school graduation, it can be seen that the most interesting patterns come from schools with low prevention, graduates before 2021 (64.7%) and since 2021 every year it has decreased steadily until the graduates in 2024 at least come from schools with low preventive policies (29.4%)). This signifies the school's concern for better and more protective to prevent its students from being exposed to online gambling.

Based on the type of high school, the most came from schools with low preventive policies precisely those who attended MA (50%) and the least from vocational schools (31%), and those who attended high school between the two. Considering that those who are exposed to *the most online gambling are* actually vocational school graduates and the fewest MA graduates, perhaps this indicates better self-control among MA students than vocational school students, so that even though the school is less protective they can protect themselves from being exposed to online gambling.

Furthermore, based on school status, it turns out that the least comes from schools with low preventive policies are those whose school status is Muhammadiyah (23.4%) and the most from the public and private with almost exactly the same percentage (42.7% and 42.6% respectively). Considering that the most exposed to *online* gambling are Muhammadiyah graduates, followed by other public and private sectors, this suggests that perhaps Muhammadiyah schools are more protective, but still miss more due to factors that are beyond the school's reach.

Next, judging from the location of the school, the students with the most low preventive policies are those whose schools are located outside Greater Jakarta/Others (47.6%) followed by Depok (45.5%), Bogor (38.9%), Jakarta (38.3%), Tangerang/Banten (37.4%), and the smallest Bekasi (36%).

Finally, based on the implementation of religion at home, the phenomenon is quite unique, where students from mediocre families mostly attend schools with low preventive policies, after fewer for those who tend to be loose or tend to be strict.

5. **Personal Religiosity Data Overview**

Personal religiosity was measured by 9 Likert scale questions each with 5 answer choices. Based on QS Surah At-Taubah 112, the respondents were asked how often (almost never, rarely, sometimes, often, almost always) ask for forgiveness from God (Q16), worship Him (Q17), give thanks to Him (Q18), travel for Him (Q19), feel submissive to Him when prostrating (Q20), feel close when prostrating (Q21), feel called to do good (Q22), feel called to prevent evil (Q23),

and take care not to violate God's provisions. Respondents who answered "often" or "almost always" were categorized as having high personal religiosity and generally low categories. The respondents' answers are detailed in Appendix 3, the categorization and composition are based on demographics in Appendix 9, and the results are summarized in Table 4.

Table 4.   Personal Religiosity Status Based on Demographic Characteristics in the Sample of New Students of PTM in Greater Jakarta FY 2024/5

Demographics	Frequency (%) Personal Religiosity Rate				Sub Sample	
	Low		Tall			
TOTAL SAMPLE	158	(27.1)	426	(72.9)	584	(100)
PTM						
UMJ	38	(25.3)	112	(74.7)	150	(100)
UHAMKA	42	(27.6)	110	(72.4)	152	(100)
UMT	31	(20.1)	123	(79.9)	154	(100)
São Paulo	47	(36.7)	81	(63.3)	128	(100)
Gender						
Woman	71	(21.1)	266	(78.9)	337	(100)
Man	87	(35.2)	160	(64.8)	247	(100)
Graduation of High School (Year)						
2024	67	(24.6)	205	(75.4)	272	(100)
2023	28	(29.8)	66	(70.2)	94	(100)
2022	24	(28.2)	61	(71.8)	85	(100)
2021	28	(34.1)	54	(65.9)	82	(100)
Before 2021	11	(21.6)	40	(78.4)	51	(100)
Types of High School						
SMA	96	(30.5)	219	(69.5)	315	(100)

Demographics	Frequency (%) Personal Religiosity Rate				Sub Sample	
	Low		Tall			
SMK	46	(26.9)	125	(73.1)	171	(100)
MA	16	(16.3)	82	(83.7)	98	(100)
High School Status						
Country	68	(26.7)	187	(73.3)	255	(100)
Muhammadiyah	29	(30.9)	65	(69.1)	94	(100)
Other private	61	(26.0)	174	(74.0)	235	(100)
High School Location						
Jakarta	35	(30.4)	80	(69.6)	115	(100)
Bogor City/Kab.	48	(29.6)	114	(70.4)	162	(100)
Depok	10	(45.5)	12	(54.5)	22	(100)
Tangerang/Banten	38	(20.9)	144	(79.1)	182	(100)
Bekasi	8	(32.0)	17	(68.0)	25	(100)
Other	19	(24.4)	59	(75.6)	78	(100)
Religion at Home						
Very loose	4	(100)		-	4	(100)
Tends to be loose	17	(70.8)	7	(29.2)	24	(100)
Mediocre	63	(37.3)	106	(62.7)	169	(100)
Tends to be strict	57	(21.8)	204	(78.2)	261	(100)
Very strict	17	(13.5)	109	(86.5)	126	(100)

Source: *Ouput* SPSS, Appendix 9. The percentage is calculated with Excel.

Table 4.5 presents the frequency of personal eligibility levels based on respondent demographics. Of the 584 samples, 426 people (72.9%) were in the category of high personal religiosity and 158 people (27.1) were in the category of

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low personal religiosity. In general, this implies that the majority of new students of PTM FY 2024/5 are religious with only a third being less or not religious. Based on the choice of PTM, respondents with low religiosity chose UMBARA (36.7%), followed by Uhamka (27.6%), UMJ (25.3%), and the smallest UMT (20.1%). Judging from gender, respondents with low religious categories had a higher percentage of men (35.2%) compared to women (21.1%).

Based on the year of high school graduation, the respondents with the least personal religiosity were graduates before 2021 (21.6%), soaring up the most graduates in 2021 (34.1%), then slowly decreasing again in the following years until 2024 (24.1%). Based on the high school seniority, the highest percentage of respondents with low personal religiosity were high school graduates (30.5%) and the least MA graduates (16.3%) while vocational school graduates were in between. In terms of high school status, respondents with low personal religiosity have the highest percentage of graduates of Muhammadiyah schools (30.9%) and the fewest other private graduates (26%), followed by the State (26.9%) and the smallest other private (26.9%). Further research is needed as to why among the categories of low religiosity most Mohammediyah graduates are compared to others.

Based on the location of the school, it appears that among the categories of low personal religiosity, the highest percentage comes from Depok (45.5%), followed by Bekasi (32%), Jakarta (30.4%), outside Jabodetabek/others (24.4%), and at least Tangerang/Banten (20.9%).

Finally, based on the implementation of religion at home, the pattern is that the stricter the implementation of religion in the country, the smaller the percentage with low personal religiosity, and the looser the more it is. Likewise, vice versa, the stricter the implementation of religion at home, the more percentage of respondents with high religion and the looser the less. Again, the core shows the importance of religious implementation at home for the development of religiosity of adolescents or students.

B. Multivariate Analysis of Logistic Regression

As explained in the previous section, the study aims to examine the relationship between risk factors (social media advertising and peer association) and protective factors (school preventive policies and personal religiosity) with the opportunity of exposure *to online* gambling among new PTM students in Greater Jakarta. Because the variables are bound by exposure to *distributed binom* or only two categories (exposed = 1, unexposed = 0) with predictors consisting of four independent variables (two potential factors and two preventive factors), the analysis technique used is multiple logistic regression (Hosmer, Lemeshow, Sturdivant, 2013).

Data analysis is done with the help *of IBM SPSS 24* software while *the output is summarized in a homemade table according to needs.*

1. Password Parameters

In logistic regression, although the predictor or free variable can be continuous, in this study all free variables are changed to categorical through the puppet code as follows:

Table 5. Password Parameters

		Frequency	Coding parameters (1)
Online Gambling Exposure (Y)	Not	474	0
	Yes	110	1
Social Media Advertising Risks (X1)	No Risk	96	0
	Risky	488	1
Peer Risks (X2)	No Risk	214	0
	Risky	370	1
School Preventive Policy Status (X3)	Tall	353	0
	Low	231	1
Personal Religiosity Status (X4)	Low	158	0
	Tall	426	1

Source: *Ouput* SPSS, Appendix 10.

This parameter code is a reference in interpreting the results of logistic regression, as will be explained later.

2. Statistical Assumptions

Similar to ordinary least square regression (*OLS),* logistic regression also examines the linear relationship between free variables and bound variables. The difference is that if the OLS variable is free in a continuous pattern, while the logistical regression is categorical. However, the assumption of the use of OLS also applies to multiple logistic regressions, especially (1) the linearity assumption, namely the existence of a linear relationship of each free variable with the bound variable, (2) the assumption of multicollinearity, the absence of a high linear relationship between fellow free variables, (3) the goodness of the model with the data. For the first two assumptions, it can be detected through a correlation matrix between variables. Because the score of each variable is binomial, the Spearman Brown parametric correlation is used, as follows:

Table 6. Spearman Brown Correlation Matrix Intervariable (N=548)

	Judol Exposure Opportunities (Y)	Social Media Advertising Risks (X1)	Peer Risks (X2)	School Preventive Policy Status (X3)	Personal Religiosity (X4)
Y	1.000	.190[**]	.285[**]	-.121[**]	-.180[**]
X1		1.000	.238[**]	-.029	-.031

	1.000	-.090*	-.039
X2			
		1.000	-.051
X3			
			1.000
X4			

** p < 0.05
Source: *Ouput* SPSS, Appendix 11.

From the table, it appears that each babas variable is significantly related to the bound variable (p < 0.05), which indicates that the assumption of linearity is not violated. The relationship between variables is also not high (none exceeds 0.8) which suggests that the assumption of multicollinearity is not violated. For assumption (3) the goodness of the model with the data, it can be done with the Hosmer-Lemeshow Test, the results of which will later be displayed in the table of logistic regression results.

3. Logistic Regression Results

Logistic regression analysis was carried out in stages. First, regression of *online gambling* exposure (Y) to both social media advertising risk factors (X1) and peer association (X2). Second, add both the protective factors of school preventive policies (X3) and personal religiosity (X4) into the regression. Third, adding the interaction between the two risk factors with the two preventive factors (X1*X3, X2*X3, X1*X4, and X2*X4) regression. The second stage of analysis yields a model of the main effect regression equation, and the third stage of analysis results in a regression equation model with interactions, the results of which are combined in one table as follows:

Table 7.   Logistic Regression Results of Gambling Exposure *Online* (Y) against Social Media Advertising (X1), Peer Associations (X2), School Preventive Policies (X3), and Personal Religiosity (X4).

Predictor	Main Effects Model				Models with interactions			
	B	Sig.	Exp(B)	CI	B	Sig.	Exp(B)	CI
X1 (1)	2.21	0.00	9.14	2.16-38.58	2.47	0.08	11.85	0.76-183.77
X2 (1)	1.95	0.00	7.00	3.40-14.39	2.84	0.00	17.16	3.44-85.68
X3 (1)	-0.64	0.01	0.53	0.32-0.87	0.16	0.92	1.17	0.05-27.45
X4 (1)	-1.02	0.00	0.36	0.22-0.58	0.03	0.98	1.04	0.04-27.03

Predictor	Main Effects Model				Models with interactions			
	B	Sig.	Exp(B)	CI	B	Sig.	Exp(B)	CI
X1* X3					-0.74	0.62	0.48	0.03-9.23
X2* X3					-0.08	0.92	0.92	0.20-4.23
X1* X4					0.11	0.94	1.12	0.06-21.66
X2* X4					-1.30	0.13	0.27	0.05-1.49
Constant	-4.11	0.00	0.02		-5.18	0.00	0.01	
(N) R2	0.249	-			0.256	-		
(HLT)χ2	2.85	0.83			0.87	0.99		

Source: *Ouput* SPSS, Appendix 12.

As shown in the table, *the main effect models* of both risk factors and protective factors, resulting in a logistic regression equation:

log(y) = $-4.11+2.21X1+1.95X2-0.64X3-1.02X4$

The Hosmer Lemeshow test yielded an insignificant $\chi2 = 2.85$ (p > 0.05), which suggests the model has a good affinity with the data. This is also shown by the Negelkerke $R2$ value of 0.249, which means that 24.9% of online gambling exposure is influenced by all four predictors.

Second, the *model with interactions* produces the following logistic regression equations:

log(y) = $-5.18+2.47X1+2.84X2+0.16X3+0.03X4-0.74X1*X3$
$-0.08X2*X3+0.11X1*X3-1.30X2*X4$

In models with this interaction, the results of the Hosmer Lemeshow Test yielded a non-significant $\chi2 = 0.87$ (p > 0.05), which suggests the model has good compatibility with the data. The result of Negelkerke $R2 = 0.256$, which means that the model with interaction can explain 25.6% of online gambling exposure, so the explainability only increases by 0.7% compared to the main effect model.

C. Hypothesis Testing

Hypotheses 1 to 4 were tested through a major effect logistic regression equation model model. While hypotheses 5-8 were tested through an interaction model.

1.   Testing the Main Effects Hypothesis
    1)   First hypothesis

The first hypothesis states that "risky social media advertising (X1) is positively related to the level of online gambling exposure (Y)". In the main effect logistic regression equation of Table 4.8, the regression coefficient BX1 = 2.21 is positive and significant ($p > 0.05$) which means that the first hypothesis is confirmed. The odds ratio (OR, Odd Ratio) produced is Exp(X1) = 9.14 with a Confidence Interval CI = 2.16−38.58 which exceeds 1. This means that by controlling (allowing the influence of) other variables, freshmen who access social media ads are at risk of being 9 times more likely to be exposed to *online* gambling than those who use social media ads are not at risk.

2) Second hypothesis

The second hypothesis states that "risky peer association (X2) is positively related to the level of exposure to *online* gambling (Y)". In the main effect logistic regression equation of Table 4.8, the regression coefficient BX2 = 1.95 is positive and significant ($p > 0.05$) which means that the second hypothesis is confirmed. The resulting odds ratio (OR) is Exp(X1) = 7.00 with a Confidence Interval CI = 3.40−14.39 which exceeds 1. This means that by controlling (allowing to remain influential) other variables, new students with peers at risk have a 7 times greater chance of being exposed to *online* gambling than those whose peers are not at risk.

3) Third hypothesis

The third hypothesis states that "school preventive policies (X1) are negatively related to the level of exposure to *online* gambling (Y)". In the main effect logistic regression equation Table 4.8, the regression coefficient BX1 = −0.64 is negative and significant ($p > 0.05$) which means that the third hypothesis is confirmed. The resulting odds ratio (OR) is Exp(X1) = 0.53 with a Confidence Interval CI = 0.32−0.87 which is less than 1. This means that by controlling (allowing the influence to remain) other variables, new students who come from schools with high preventive policies are half the chance to be exposed to *online* gambling compared to those from schools with low preventive policies.

4) Fourth hypothesis

The fourth hypothesis states that "risky social media advertising (X1) is positively related to the level of online gambling exposure (Y)". In the main effect logistic regression equation of Table 4.8, the regression coefficient BX1 = 2.21 is positively and signified ($p > 0.05$) which means that the fourth hypothesis is confirmed. The resulting odds ratio (OR) is Exp(X1) = 0.36 with a Confidence Interval CI = 0.22−0.58 which is less than 1. This means that by controlling (allowing the influence to remain) other variables, new students with a high level of personal religiosity are three times less likely to be exposed to *online* gambling than those with low levels of personal religiosity.

2. Interactive Effects Hypothesis Testing
   5) Fifth hypothesis

The fifth hypothesis states that "the relationship between peers and media advertising on the level of exposure to *online gambling* in high school graduates depends on the preventive policy of the home school." In the logistic regression equation with the interaction effect in Table 4.8, it can be seen that the logistic regression coefficient of the interaction variable of school preventive policy with peer association (BX1*X3), and the interaction variable between school preventive policy and social media advertising (BX2*X3) are not significant ($p > 0.05$) respectively. Therefore, the fifth is about the dependence of peer relations and media advertisements on the policy of the school of origin, which is not supported. In other words, the relationship between peer association and social media advertising and the level of exposure to *online gambling* in STLA graduates is not different based on the level of preventive policy of the school of origin.

6) Sixth hypothesis

The sixth hypothesis states that "the relationship between peers and media advertising on the level of exposure to *online gambling* in high school graduates depends on personal religiosity." In the logistic regression equation with the interaction effect in Table 4.8, it was seen that the logistic regression coefficient of the interaction of personal religiosity with peer association (BX1*X4), and the variable interaction of personal religiosity with social media advertising (BX2*X4) were not significant ($p > 0.05$) respectively (p 0.05). Therefore, the sixth-fifth hypothesis about the dependence of peer relationships and media advertising on personal religiosity, is not supported. In other words, the relationship between peer association and social media advertising and the level of exposure to *online gambling* in STLA graduates does not differ based on the level of personal religiosity.

4. CONCLUSION

The study aims to examine the relationship between risk factors (social media advertising and peer association) and protective factors (preventive policies of school of origin and personal religiosity) with the level of online gambling prevalence among new PTM students in Greater Jakarta. From the logistic regression analysis of the sample data of 584 new students, the following conclusions were obtained. First, risky social media advertising (X1) was positively related to the level of exposure to online gambling (Y). The more risky the social media ads accessed, the higher the chances of exposure to online gambling. On the contrary, there is no risk that social media ads are accessed, the lower the chance of exposure to online gambling. By controlling (allowing other variables) to be influenced, freshmen who access social media ads are at risk 9 times more likely to be exposed to online gambling than those who access social media ads are not at risk. Second, risky peer association (X2) is positively related to the level of exposure to online gambling (Y). The more risky peer

association is, the higher the chance of exposure to online gambling, on the other hand, the less risky peer association is, the lower the chance of exposure to online gambling. By controlling (allowing other variables) to be influenced, new students with peers at risk are 7 times more likely to be exposed to online gambling than those who are not at risk.

Third, the school's preventive policy (X3) is negatively related to the level of exposure to online gambling (Y). The higher the preventive policy of the school of origin, the lower the chance of exposure to online gambling, on the other hand, the lower the preventive policy of the school of origin, the higher the chance of exposure to online gambling. By controlling (allowing the influence to remain) other variables, new students who come from schools with high preventive policies are half the chance of being exposed to online gambling than those from schools with low preventive policies. Fourth, personal religiosity (X4) is negatively related to the level of exposure to online gambling (Y). The higher personal religiosity, the lower the chance of being exposed to online gambling and the lower personal religiosity, the higher the chance of being exposed to online gambling. By controlling (allowing the influence to remain) other variables, new students with a high level of personal religiosity are three times less likely to be exposed to online gambling than those with a low level of personal religiosity.

Fifth, the relationship between the risk of social media advertising (X1) and the risk of peer association (X2) with the opportunity of exposure to online gambling (Y) does not depend on the level of preventive policy of the school of origin. Although the interaction coefficient of school preventive policies with the two risk factors is negative, which means that the peremptive policy is as good as the effect of peer association and social media advertising, this reduction is not significant. The insignificance of the interaction coefficient is only a sampling problem, because the small number of groups exposed based on the free variable category (both risk factors and both preventive factors) will be smaller if it is grouped again based on the level of preventive policy of the school of origin. Sixth, the relationship between social media advertising risk (X1) and peer risk (X2) with the chance of exposure to online gambling (Y) does not depend on the level of personal religiosity. Similar to the fifth finding, although the coefficient interaction of personal religiosity with the two risk factors was negative, meaning that personal religiosity tended to reduce the effect of both risk factors on online gambling exposure, this reduction was not significant. The insignificance of the interaction coefficient is only a sampling problem, because the small number of groups exposed is based on the category of free variables (both risk factors and both preventive factors) if grouped again based on the level of religiosity.

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