Cyberbullying and Its Impact on Self-Esteem and Emotional and Behavioral Problems Among University Students in Kuwait – A Cross-Sectional Study

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Abstract

Introduction: Cyberbullying is a modern phenomenon with public health implications due to the associated serious mental disorders, emotional distress, substance use, and suicidal behaviour. Young people are at a higher risk of cyberbullying and its complications. This study aimed to determine the prevalence of cyberbullying and its relationship with self-esteem and behavioural problems among Kuwait University Students.

Methods: A cross-sectional study was conducted in seven randomly selected colleges of Kuwait University using a self-administered questionnaire. The questionnaire included three sections: Cyberbullying questions, the Rosenberg Self-Esteem Scale, and the Strengths and Difficulties Questionnaire.

Results: A total of 1252 students were included with a mean age of 20.58 years. Most students were females (n = 1049, 84.2%), single (n = 1078, 86.4%) and Kuwaiti (89.3%). Of the cohort, 194 students (15.8%) have been cyberbullied in their lifetime and 4% (n = 49) were cyberbullied in the last 30 days. Female students (OR = 2.677, P<0.001) and students with divorced (OR = 2.35, P < 0.006) or separated (OR = 3.730, P<0.006) parents had a higher risk of being affected by cyberbullying. In addition, participants who were dissatisfied with their financial situation were more likely to be affected by cyberbullying (OR = 1.096, P = 0.008). Emotional problems (P < 0.001), conduct problems (P < 0.001), hyperactivity problems (P = 0.029), peer problems (P < 0.001), externalizing problems (P < 0.001) and internalizing problems (P < 0.001) were higher among students who were exposed to cyberbullying in their lifetime compared to other students.

Conclusion: This study revealed a relatively high prevalence of cyberbullying among college students in Kuwait. Since emotional problems and self-esteem are significantly related to cyberbullying, university-wide public health promotion campaigns are encouraged to address the negative consequences of cyberbullying on students' psychological health.

Keywords: Cyberbullying, Kuwait, Behavioral problems, College, Students, Universities

1. Introduction

Bullying, defined as aggressive and negative physical or verbal behaviours against another individual that involve improper use of social power, is a prevalent problem among young people (Menesini, 2017). It is considered a public health concern among young people and is linked to several psychosocial negative impacts (Krešić Ćorić, 2020).

Cyberbullying is defined as bullying events using electronic communication tools such as computers, laptops, mobile phones, tablets, or other devices (Englander, 2017). Compared to traditional bullying, cyberbullying is more discrete as it occurs over the internet and behind screens. Many studies revealed that cyberbullying can lead to more severe harm and consequences compared to traditional bullying. Victims of cyberbullying were found to suffer from high distress, emotional instability, and social anxiety. Higher rates of self-harm and suicide were also reported among victims of cyberbullying (Livazović, 2019). In addition, deterioration of academic performance, poor school bonding and suboptimal perceptions of the education environment are linked to cyberbullying (Beran, 2007).

Although the prevalence rates of cyberbullying among students are highly variable, several studies showed high

rates of cyberbullying among students. It reached more than 60% in some studies (Kowalski, 2015; Chun, 2020). In Saudia Arabia, a study among 355 students revealed that 42.8% of them were cyberbullied (Gohal, 2023).

In Qatar, a study of 836 students found that most students were involved in cyberbullying; 6.8% were cyberbullies, 29.2% were cyberbullying victims and 35.8% were cyberbully-victims. The study also reported a significant association between cyberbullying and depression (p<0.001) (Alrajeh, 2021). In Kuwait, a study among middle school students concluded that 30.2% of students reported cyberbullying, and 18.9% were cyberbullying victims. The study also found that students with physical disabilities, students with divorced/widowed parents and students of non-Kuwaiti parents had higher rates of cyberbullying (Abdulsalam, 2017). Research on cyberbullying recognized certain characteristics of cyberbullies, cyber-victims and cyberbully-victims. Cyberbullies tend to show high levels of aggression, maladaptive self-esteem, and narcissism (Fan, 2019; Martínez-Monteagudo, 2019). In contrast, victims of cyberbullying appear to be more emotional, showing empathy and low self-esteem. In addition, psychological symptoms of depression, anxiety, and paranoia, as well as violence were high among victims of cyberbullying (Nixon, 2014).

Due to the rapid advancements of technology and the novelty of cyberbullying as well as the negative consequences of cyberbullying, research on this field is of high value. This study aimed to investigate the prevalence of cyberbullying among Kuwait University students and to determine the relationship between cyberbullying and sociodemographic factors, self-esteem, and behavioural and emotional problems.

2. Methods

2.1 Setting and Design

A cross-sectional study was conducted in the period between 13th and 17th October 2019 in seven randomly selected colleges in Kuwait University. The selected colleges included Education, Law, Science, Life Sciences, Social Sciences, Dentistry, and Allied Health colleges. Kuwait University has six campuses with approximately 40,000 students, 1,565 faculty members, and 17 colleges (Kuweb.ku.edu.kw, 2019). The current study was approved by the HSC Ethics Committee for Student Research. Approval letters to administer the questionnaire were obtained from the deans of the selected colleges.

2.2 Questionnaire

The study questionnaire contained five sections with a total of 62 questions. The first section consisted of 13 sociodemographic questions including age, sex, marital status, nationality, college, year of study, and overall college-level GPA. The second section consisted of four questions that inquired about the use of electronic devices such as devices used the most to access the internet, social media sites mostly used, number of hours spent for educational and non-educational purposes. The third section was the 10-item Rosenberg Self-Esteem Scale with a 4-point rating scale: "Strongly agree", "Agree", "Strongly disagree", and "Disagree". Section four consisted of 10 cyberbullying questions (6 questions on cyberbullying victimization; and 4 questions on cyberbullying offending) Approval to use the questionnaire and translate it into Arabic was obtained from the authors. The questionnaire was translated into Arabic by the research team and their supervisor who are proficient in both languages and was re-checked for accuracy. It has a high internal consistency (Cronbach alpha = 0.86). (Vermillion, 2007). The fifth and final section of the questionnaire was the 25-item Strengths and Difficulties Questionnaire (SDQ). The SDQ is a brief behavioural screening questionnaire assessing positive and negative attributes across five domains: 1) emotional symptoms (5 items), 2) conduct problems (5 items); 3) hyperactivity/inattention (5 items); 4) peer relationship problems (5 items); 5) prosocial behaviour (5 items), all of which were on a 3-point rating scale: 0 = Not True; 1-Somewhat True; 2 = Certainly True. The internal consistency of the questionnaire is high (Cronbach α = 0.73) The authors of the SDQ permitted us to use both English and Arabic versions of their questionnaire. (Goodman, 2001).

2.3 Scoring of the Measures

For the Rosenberg Self-Esteem Scale, items 19,22,23,25,26 were reverse-scored, and the overall scores were summed for all ten items, with higher scores indicating higher self-esteem. Cyberbullying victimization questions (31,32a-h) were summed, and the cyberbullying offending questions (35,36a-h) were summed to obtain a measure of the extent of exposure to a variety of different types of either offending or victimization. The answer options were recoded into a dichotomy (never and once=0; a few times and many times-1); range = 0-9. Higher scores indicate that a bully used different types of bullying behaviours or that a victim was the recipient of different types of cyberbullying. The 24-item SDQ is comprised of 5 scales: emotional problems scale [items 40, 45, 50, 53, 61], conduct problems scale [items 42, 44 (reverse-scored), 49, 55, 59], hyperactivity scale [items 39, 47, 52, 58 (reverse-scored), 62 (reverse- scored)], peer problems scale [43, 48 (reverse-scored), 51 (reverse-scored), 56, 60]

and prosocial scale [items 38, 41, 46, 54, 57]. The scale scores were obtained by summing the individual scores for each scale. In addition, the total difficulties score was calculated as the summation of scores from all the scales except the prosocial scale, the externalizing score was calculated as the sum of the conduct and hyperactivity scales, and the internalizing score was calculated as the sum of the emotional and peer problems scale.

2.4 Data Collection Procedure

The questionnaires were distributed to students in the classrooms of the seven randomly selected colleges of Kuwait University. Weekly class schedules for all selected colleges were obtained before data collection. The classes were selected based on convenience whereby professors who granted permission and had larger numbers of students were surveyed. Upon entering the classroom, the research team introduced themselves and the purpose of the study. The questionnaires as well as the consent forms were distributed to the students at either the beginning or the end of each class. The students were informed that participation in the study was voluntary and anonymous. The response rate in this study was 99.2%

2.5 Statistical Analysis

Data were entered and analyzed using the Statistical Package for Social Sciences version 25.0. Prior to analysis, data cleaning was carried out to ensure the validity of the data. As a preliminary investigation of the data, descriptive analysis was used to obtain frequencies and estimate proportions. For bivariate analysis, Pearson's Chi-Square test and Fisher's test were used to assess significant relationships between categorical variables. Independent two-sample t-test, Mann Whitney U test, and analysis of variances test (ANOVA) were used to assess the significance of quantitative variables. Logistic regression analyses were used to explore the relationship between the binary, dependent variable (0 = no history of cyberbullying: 1 = endorsement of any type of cyberbullying behaviours) and sociodemographic factors, self-esteem scores, and SDQ scores.

3. Results

A total of 1252 students were included with a mean age of 20.58 ± 3.056 years. Most students were females (n = 1049, 84.2%), single (n = 1078, 86.4%) and Kuwaiti (89.3%). Approximately, two-thirds of the participants reported that their fathers and mothers had a university degree or higher (62.6% and 64.8%, respectively) and more than 90% were satisfied with their financial situation (91.2%). Regarding current GPA, about 18.9% (n = 203) reported having a GPA of 3.60, while more than 12.2% (n = 131) reported having a GPA <2.4. Table 1.

Table 1. Sociodemographic and baseline characteristics

Sociodemographic and baseline characteristics		TN=1253 n (%)
Sex	Male	197 (15.8)
	Female	1049 (84.2)
Age in years, mean ± SD		20.58 ±3.056
Nationality	Kuwaiti	1107 (89.3)
	Non-Kuwaiti	133 (10.7)
Marital status	Single	1078 (86.4)
	Married	114 (9.1)
	Engaged	40 (3.2)
	Divorced, widowed and separated	15 (1.3)
Type of high school	Public	1130 (90.5)
	Private	118 (9.5)
Year of college	1st year	297 (23.8)
	2nd year	238 (19.1)
	3rd year	377 (30.2)
	4th year	229 (18.3)
	Others	107 (8.6)

Father's educational level	Lower than a university degree	461 (37.4)
	University degree or higher	774 (62.6)
Mother's educational level	Lower than a university degree	434 (35.2)
	University degree or higher	800 (64.8)
	Married	1080 (87.0)
	Divorced	76 (6.1)
	Widowed	67 (5.4)
	Separated	18 (1.5)
Satisfaction with financial situation	Satisfied	1131 (91.2)
	Dissatisfied	98 (7.9)
	I do not know	12 (1.0)
Current GPA	4.00-3.60	203 (18.9)
	3.59-3.20	239 (22.2)
	3.19-2.80	255 (23.7)
	2.79-2.40	247 (23.0)
	<2.40	131 (12.2)

As shown in Table 2, mobile phones were the most commonly used electronic devices (n = 957, 82.6%), followed by tablet devices and laptop computers, respectively (8.8% and 7%, respectively). Twitter (n = 386, 35.2%), Snapchat (n = 336, 30.7%), and Instagram (23.1%) were the most frequently visited sites. Of the cohort, 49% reported using the devices for non-educational purposes for more than four hours while 26.4% of them reported using the devices for 3-4 hours in non-educational activities.

Table 2. Types and frequency of use of electronic devices among Kuwaiti university students

Types and frequency of use of electronic devices among Kuwaiti university students (TN=1253)		n (%)
Most commonly used electronic devices	None	7 (0.6)
	Laptop computer	81 (7.0)
	Desktop computer	10 (0.2)
	Tablet (iPad, Kindle, Samsung Galaxy, etc.)	102 (8.8)
	Mobile phone (Smartphones, Blackberry, etc.)	957 (82.6)
	Others	2 (0.2)
Most commonly used social sites	Twitter	386 (35.2)
	Snapchat	336 (30.7)
	Facebook	1 (0.1)
	Instagram	253 (23.1)
	Google+	5 (0.5)
	YouTube	93 (8.5)
	None	7 (0.6)
	Other	15 (1.4)
Hours spent daily for educational purposes	None	51 (4.1)
	< 1 hour	297 (23.9)
	1-2 hours	436 (35.1)
	3-4 hours	227 (18.3)
	>4 hours	231 (18.6)

Hours spent daily for non-educational purposes	None		21 (1.7)
	< 1 hour		79 (6.4)
	1-2 hours		205 (16.6)
	3-4 hours		326 (26.4)
	>4 hours		606 (49.0)

As shown in Table 3, 194 students (15.8%) have been cyberbullied in their lifetime and 4% (n = 49) were bullied in the last 30 days. According to the victims of cyberbullying, mean or hurtful comments (n = 14, 31.1%) and mean names or comments about religion (n = 14, 31.1%) were the most encountered offences. Mean or hurtful comments (n = 8, 30.8%) and mean or hurtful pictures (n = 5, 19.2%) were the most common offences according to those who cyberbullied others. Twitter was the most frequent site in which cyberbullying took place according to offenders (37.5%) and victims (31.4%).

Table 3. Prevalence and characteristics of cyberbullying among the participants

			n (%)
Victims	In my lifetime, I have been cyberbullied (TN=1252)		194 (15.8)
	In the past 30 days, I have been cyberbullied (TN=1252)		49 (4)
	Commonest offences in past 30 days, TN=49	Mean or hurtful comments	14 (31.1)
		Mean names or comments about religion	14 (31.1)
		Mean names or comments about race/color	13 (29.5)
		Threatened to hurt someone online	9 (21.4)
	The commonest environment for cyberbullying in the past 30 days, TN=49	Twitter	27 (31.4)
		Cell phone, text messages	27 (31.4)
		Cell phone	25 (29.1)
		Chat room	21 (24.1)
		Massive multiplayer online games	19 (21.8)
Offenders/ Cyberbully	I had cyberbullied others in my lifetime (TN=1252)		80 (6.8)
	In the past 30 days, I have cyberbullied others (TN=1252)		30 (2.6)
	Commonest offences by offenders in past 30 days, TN=49	Mean or hurtful comments	8 (30.8)
		Mean or hurtful picture	5 (19.2)
		Spread rumors	3 (11.5)
		Mean names or comments about race/color	13 (29.5)
	The commonest environment for cyberbullying in the past 30 days, TN=30	Twitter	15 (37.5)
		Cell phone, text messages	13 (36.10)
		Cell phone	13 (36.10)
		Instagram	12 (30.0)
		Snapchat	10 (25.6)

A significant association between students' marital status and cyberbullying behaviours (p-value = 0.022) was found. No significant associations were found between cyberbullying status and participant's sex, nationality, year of college, satisfaction with financial status and college performance. Table 4.

Table 4. The association between socio-demographic characteristics, victims, bullies and bully-victims

Sociodemographic and baseline characteristics		TN=1253 n (%)	Victim N=39	Bully N=20	Bully-victim N=10	P value
Sex	Male	197 (15.8)	10 (25.6)	7 (36.8)	4 (40.0)	0.574
	Female	1049 (84.2)	29 (74.4)	12 (63.2)	6 (60.0)	
Nationality	Kuwaiti	1107 (89.3)	37 (97.4)	19 (95.0)	9 (90)	0.551
	Non-Kuwaiti	133 (10.7)	1 (2.6)	1 (5.0)	1 (10)	
Marital status	Single	1078 (86.4)	36 (92.3)	13 (65.0)	7 (70)	**0.022**
	Married	114 (9.1)	3 (7.7)	4 (20)	2 (20)	
	Engaged	40 (3.2)	0 (0)	2 (10.0)	0 (0)	
	Divorced, widowed and separated	15 (1.3)	0 (0)	1 (5)	1 (10)	
Type of high school	Public	1130 (90.5)	36 (94.7)	20 (100)	9 (90)	0.255
	Private	118 (9.5)	2 (5.3)	0 (0)	1 (10)	
Year of college	1st year	297 (23.8)	4 (10.3)	5 (25.0)	3 (30.0)	0.104
	2nd year	238 (19.1)	10 (25.6)	3 (15.0)	3 (30.0)	
	3rd year	377 (30.2)	17 (43.6)	6 (30.0)	0 (0.0)	
	4th year	229 (18.3)	7 (17.9)	5 (25.0)	4 (40.0)	
Father's educational level	Lower than a university degree	461 (37.4)	17 (43.6)	12 (60.0)	6 (60.0)	0.404
	University degree or higher	774 (62.6)	22 (56.4)	8 (40.0)	4 (40.0)	
Mother's educational level	Lower than a university degree	434 (35.2)	25 (64.1)	9 (45.0)	5 (50.0)	0.339
	University degree or higher	800 (64.8)	14 (35.9)	11 (55.0)	5 (50.0)	
Parents' marital status	Married	1080 (87.0)	34 (89.5)	17 (85.0)	9 (90.0)	1.000
	Divorced	76 (6.1)	3 (7.9)	2 (10.0)	1 (10.0)	
	Widowed	67 (5.4)	1 (2.6)	1 (5.0)	0 (0.0)	
	Separated	18 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	
Satisfaction with financial situation	Satisfied	1131 (91.2)	29 (76.3)	18 (90.0)	10 (100.0)	0.504
	Dissatisfied	98 (7.9)	7 (18.4)	2 (10.0)	0 (0.0)	
	I do not know	12 (1.0)	2 (5.3)	0 (0.0)	0 (0.0)	
Current GPA	4.00-3.60	203 (18.9)	7 (19.4)	4 (22.2)	0 (0.0)	0.496
	3.59-3.20	239 (22.2)	6 (16.7)	2 (11.1)	2 (25.0)	
	3.19-2.80	255 (23.7)	5 (13.9)	4 (22.2)	1 (12.5)	
	2.79-2.40	247 (23.0)	12 (33.3)	2 (11.1)	3 (37.5)	
	<2.40	131 (12.2)	6 (16.7)	6 (33.3)	2 (25.0)	

Female students (OR = 2.677, P<0.001) and students with divorced (OR = 2.35, P<0.006) or separated (OR = 3.730, P<0.006) parents had a higher risk of being affected by cyberbullying. In addition, participants who were dissatisfied with their financial situation were more likely to be affected by cyberbullying (OR = 1.096, P = 0.008).

Table 5. Logistic regression of the association between sociodemographic data and cyberbullying status

Sociodemographic characteristics		Bully/Victim/Bully-victim TN=244 n (%)	All others N=928 n (%)	P value	Odds ratio (95% Confidence interval)	P value
Sex	Male	67 (27.6)	127 (13.0)	<0.001	Male (Reference)	<0.001
	Female	176 (72.4)	851 (87.0)		2.677 (1.737-4.123)	
Mother's educational level	Lower than a university degree	145 (59.7)	506 (52.2)	0.036	University (Reference)	0.051
	University degree or higher	98 (40.3)	464 (47.8)		1.422 (0.999-2.026)	
Parents' marital status	Married	200 (82.3)	860 (88.0)	0.004	Married (Reference)	0.006
	Divorced	26 (10.7)	49 (5.0)		2.35 (1.311-4.232)	
	Widowed	11 (4.5)	56 (5.7)		0.883 (0.409-1.904)	
	Separated	6 (2.5)	12 (1.2)		3.730 (1.122-12.400)	
Satisfaction with financial situation	Satisfied	207 (85.2)	906 (92.7)	0.001	1.096 (1.025-1.173)	0.008
	Dissatisfied	33 (13.6)	63 (6.4)			
	I do not know	3 (1.2)	8 (0.8)			

Emotional problems (P < 0.001), conduct problems (P < 0.001), hyperactivity problems (P = 0.029), peer problems (P < 0.001), externalizing problems (P < 0.001) and internalizing problems (P < 0.001) were higher among students who were exposed to cyberbullying problems in their lifetime compared to other students. Table (6).

Table 6.

	Differences between students according to their 30-days cyberbullying behaviours and SDQ			Differences between students according to their lifetime cyberbullying behaviours and SDQ		
	Bully/victim/bully-victim n=244	Others n=982	P value	Bully/victim/bully-victim n=244	Others n=982	P value
Emotional problems scale, SD (IQR)	4.50 (3)	4.00 (3)	0.001	4.00 (3)	3.00 (3)	<0.001
Conduct problems scale, SD (IQR)	3.00 (3)	2.00 (1)	<0.001	3.00 (2)	2.00 (1)	<0.001
Hyperactivity problems scale, SD (IQR)	5.00 (2)	4.00 (2)	0.001	4.00 (3)	4.00 (2)	0.029
Peer problems scale, SD (IQR)	3.00 (1)	3.00 (1)	0.001	3.00 (2)	3.00 (1)	<0.001
Prosocial scale, SD (IQR)	7.50 (4)	8.00 (2)	0.304	8.00 (2)	8.00 (3)	0.698
Total difficulty score, SD (IQR)	16.00 (6)	12.00 (7)	<0.001	15.00 (7)	13.00 (7)	<0.001
Externalizing score, SD(IQR)	8.00 (3)	7.00 (3)	<0.001	7.00 (4)	6.00 (3)	<0.001
Internalizing score, SD(IQR)	8.00 (3)	6.00 (4)	<0.001	7.00 (4)	6.00 (4)	<0.001

4. Discussion

This cross-sectional study was conducted to assess the prevalence and determinants of cyberbullying among Kuwait University students. The results of the present study showed that almost 1 in every 6 students reported

cyberbullying in their life. Similar rates of cyber-victimization and cyberbullies were reported in the literature. For instance, Hamal (2017) et al. reported that the prevalence rates for cyber-victims and cyberbullies among college students in the past year were 12% and 8.2%, respectively. The variable reported rates of cyberbullying could be explained by different definitions of cyberbullying, different study populations and different tools and questionnaires. (Selkie, 2016)

The results in this study demonstrated that social media platforms like Twitter and Instagram are common places in which cyberbullying takes place. Similar findings were reported by other studies. For instance, a study done in United Arab of Emirates revealed that approximately 90% of university students reported cyberbullying on social media platforms like Instagram and Facebook. The similarity of findings between our study and other studies suggests that social media platforms such as Twitter and others, appear to be emerging as common sites for cyberbullying perpetration and victimization, in part a reflection of their increasing popularity.

Several studies also examined the sociodemographic characteristics of cyberbullying victims and revealed conflicting findings regarding the impact of sex on cyberbullying. While some studies reported a higher prevalence of cyberbullying among female students, other researchers reported no sex differences.

(Caravaca Sánchez, 2016; Palermiti, 2016). The present study revealed that females were less likely to be involved in cyberbullying behaviours in comparison to males.

As seen in our results, many studies concluded that students of divorced or separated parents and students were more likely to be involved with cyberbullying than those who were not (Chen, 2018). In terms of the participant's financial situation, we found that those who were dissatisfied with their financial situation were more likely to endorse cyberbullying behaviors. Several studies were consistent with our findings. For example, a systematic review of 28 studies revealed that bullying victims and bully victims were more likely to have low socioeconomic status (Tippett, 2014). Furthermore, we found that participants with less educated mothers were more likely to be involved in cyberbullying behaviors compared to those with more educated mothers. These results were consistent with Hamal (2017), and Chen et al., (2018), all of which found that those with mothers who had a lower educational level were more likely to be involved in cyberbullying behaviors.

In agreement with our study, many previous studies reported an association between cyberbullying and low self-esteem, emotional problems and behavioral issues. (Varghese, 2017)

Considering the prevalence and the associated consequences of cyberbullying as found in this study, modern communication tools such as social media platforms should be monitored to filter hate comments, create a safe environment, and prevent cyberbullying. In addition, educational programs by governments, physicians, and teachers to increase the awareness of people, families and society are also essential. Consulting mental health specialists is necessary to avoid the long-term impacts of cyberbullying among victims.

This study has several strengths. It is the first study to assess the prevalence and characteristics of cyberbullying among college students in Kuwait. A large sample size was obtained and validated tools were used. In addition, several analyses were conducted to determine the associations of cyberbullying. However, this study has some limitations as well. The cross-sectional nature of this study could not establish causation. A convenience sampling method was used to recruit the students that may have affected the representativeness of our sample. Additionally, recall bias may have played a role in remembering lifetime cyberbullying experiences.

5. Conclusion

In summary, the present study revealed a relatively high prevalence among college students in Kuwait. A strong association was found between students who were exposed to cyberbullying and emotional, personal, social and conduct problems. Therefore, policies and preventive measures should be implemented by the students' affairs section to combat cyberbullying and its consequences. Further research to assess the types of bullying behaviours and the effectiveness of the interventions is needed.

Informed Consent

Obtained.

Provenance and Peer Review

Not commissioned; externally double-blind peer reviewed.

Data Availability Statement

The data that support the findings of this study are available on request.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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