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RESEARCH ARTICLE

SEXUAL AND RISKY SEXUAL BEHAVIORS EXPERIENCE OF WOLKITE UNIVERSITY STUDENTS CENTRAL ETHIOPIA- DESCRIPTIVE CROSS-SECTIONAL STUDY

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ABSTRACT

Background: The risky behaviors of youngsters or youths may further be worsened by the logic that university students are too many in number, lack facilities for sexual and reproductive health services and live away from their parents and free from parental control. To tackle the issue, evidence based intervention like improved access for youth's friendly reproductive health services is crucial. In Ethiopia, despite the fact that much has been said about sexual and related issues of higher institution students, the assessment of the problem is not widely covered and search for solutions is mostly after the problem become deep-rooted. So, the purpose of this study was to assess the level of risky sexual behaviors among Wolkite University (one of the public higher institute) students in Ethiopia so as to respond for the problem. **Methods:** A facility based cross-sectional study was employed using Cluster sampling to identify 1,123 students' from each college, departments & sections of the colleges in the University, list of clusters (groups) was established with area of study and year of study. To select these clusters, list of cumulative frequencies of number of students was calculated. Then the total number of students were divided by the clusters to get the sampling interval. The first cluster was selected randomly. The total sample size was divided proportionately to the selected clusters and to both sexes (male and female). Accordingly, males and females were selected based on percentages calculated. Finally, a systematic sampling method was applied to select males and females from the cluster selected for the study after dividing the cluster in to male and female groups. **Result:** In this emerging university ever use of substance reportedly was somewhat higher than a quarter, 28.7% (322) from a total of 1123 students. Among students reported ever use of substances, alcohol consumption was the predominant one, 157(14.0%), followed by khat, 57 (5.1%). **Conclusion and Recommendation:** The institute needs substantial progress in availing youth friendly reproductive health services as huge number of the youngsters, 225(20%) had risky sexual behavior and currently 7(1.5%) were HIV positive. Moreover, services for youths should be friendly and available with skillful professionals. This can be realized through the effort of tremendous stakeholders in the compound and elsewhere in the country like ministry of education/health or non-governmental organizations.

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INTRODUCTION

The global interactions of societies are subjected to adapt and demonstrate various cultural values that are introduced from different countries which are expected more simply shared or accessed by campus students. To this end, the general orientations under development may be that people tend to be so materialist, and selfish. As well stated by experts, society is one of the three pillars of SDG that means investment in

adolescent health is also essential to achieve the 17 SDGs and their 169 targets, each of which relates to adolescent development, health or well-being directly or indirectly. To achieve this, improved access for youth's friendly reproductive health services for youngsters is crucial (United Nations, 2001). In Sub-Saharan Africa, it was reviewed that 25% of 15-19 years old adolescents reported sex before age 15 and 20% commenced childbearing although the prevalence varies widely between countries. Female youth's rate of condom use at last sex ranged from 26% in West Africa to 55% in both East and Southern Africa where as males rate of condom use at last sex ranged from 43% in West Africa to 72% in East Africa. The incidence of single sexual partnership was highest

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in East Africa (84% among females and 73% among males) and lowest in Central Africa (54% among females and 46% among males). In Africa the proportion of women aged 15–19 years who have had an unsafe abortion is higher than in any other region and half of all maternal deaths from unsafe abortion in Africa are in women under 25 (Odimegwu, 2018). The youngsters are easy going for sexual relationship, which is unique referring the conservative culture that the Ethiopia society is having. Of course, there have been improvements in the policy and legal framework for adolescent and youth health and development, in the incidence and prevalence of HIV and STIs, and in the knowledge and attitudes towards AYSRH. However, besides limitation in scope, the AYSRH strategy was also challenged by lack of multispectral collaboration, low stakeholder and youth involvement, inadequate resources, and persistent social and cultural barriers. As a result, limitations still exist and adolescents and youth continue to face particular challenges to their health and development (<https://www.researchgate.net/publication/323525792>).

In Ethiopia HIV/AIDS Knowledge of prevention which was defined as knowing that both condom use and limiting sexual intercourse to one uninfected partner and the like showed that 24 percent of young women and 39 percent of young men 15–24 have knowledge about HIV prevention. Among both sexes, urban youth are more likely than rural youth to have knowledge about HIV prevention. The percentage of youth with knowledge about HIV prevention is lower among those age 15–17 than among older youth, especially for men (Central Statistical Agency, 2016). Those universities which are found in countries with high HIV/AIDS prevalence, the vast majority of their students and staffs might have been infected with HIV (CSA, 2006). In Ethiopia, sexual activity with all the associated risks such as STIs including HIV infection will sets on during adolescence period. Moreover, Ethiopia is among countries with highest HIV infection rate in the world. It is estimated that 20% of youth/adolescent population is found in the age group of 15–24 years, of which 2.9% is HIV infected (Association of African Universities, 2004; Disease prevention and control department, 2002; FHAPCO, 2006). Therefore, this research is expected to react deservedly for those cross cutting issues like HIV/AIDS, Youth and adolescents sexual and reproductive health status in general, abortion and drug or alcohol use of tremendous risky conditions in particular as these manifestations may be accelerated in type and magnitude in relation to increment in number of students of varied background so as to provide scientific and evidence based response at each level or depth of the entities found.

Statement of the problem: Adolescents and youths of today are 1.8 billion strong and form a quarter of the world's population. They are shaping social and economic development, challenging social norms and values, and building the foundation of the world's future. For millions of young people around the world, puberty brings not only changes to their bodies but also new vulnerabilities to human rights abuses, particularly in the arenas of sexuality, marriage and child bearing. The leading causes of mortality and morbidity among girls and young women aged 15–24 years in low and middle income countries are complications of pregnancy, unsafe abortion and childbirth. In 2011, 41 percent of all new HIV infections were among adolescents and youth: being both biologically and socially more vulnerable, of those living with HIV and AIDS, girls and young women outnumber young men by almost two to one (UNFPA/CPD, 2012).

These risky behaviors of youths may further be worsened by the fact that university students are too many in number, lack facilities for sexual and reproductive health services and live away from their parents and free from parental control. In addition, some are subjected to wide spread substance use and peer-pressure that aggravate the risky behaviors. The challenges that young people face and the decisions they make can have a tremendous impact on the quality and length of their lives as well as on the development of their personal and social environment. Thus, it is critically important to address youth sexual behavior and to recognize many factors that affect young people's behavior (Shane, 2008). Despite this fact, little has been known about the pattern of risky sexual behavior in the context of higher education institutions in Ethiopia in general and not known at all in Wolkite University in particular. But, an assessment employed in Jimma in 2009 G.C showed that the mean age at first sexual intercourse was 17.7±2.7 years. Most, 75.6%, started sexual intercourse during secondary school. Among whoever had sex, 51.0% had sex in the last 12 months and 28.3% had multiple sexual partners. Consistent condom use with non-regular partner in the last 12 months was 69.1% (Nigatu, 2011). To this end, this study was conducted to assess risky sexual behaviors among students of Wolkite University.

METHODS AND SUBJECTS

The study was conducted in Wolkite University (WKU) in January 2018 which was designed to investigate comprehensive knowledge on HIV and risky sexual behaviors in Ethiopia higher institutions. A cross sectional study design was employed. All regular students whose age between 17–24 years were used as the source population, whereas students in the same category but selected for providing the data was used as the study population. Students who are in the age category of 17 up to 24 years irrespective of the batch, sex, and their origin/place of residence were included in the study. Non-regular students of the university and students who were unable to respond administered questioner due to illness were excluded from the study.

Sample size determination: The sample size for study was determined using single proportion population formula by Epi Info stat calc for sample size assuming: Proportion of youth female comprehensive knowledge 51% (as outcome variable), 95% confidence interval, 3% margin of error, design effect 2 and 90% expected response rate. Accordingly, the total sample size for the study was 1,123 students.

Sampling technique and procedure: A simple sampling technique was employed. Moreover, probability proportional to size procedure was used to select the study units, thus: Of the colleges in the University, list of clusters (groups) were established with area of study and year of study. From the total clusters in each college, clusters were selected. To select these clusters list of cumulative frequencies of number of students were calculated. Then the total number of students were divided by the clusters to get the sampling interval. The first cluster was selected randomly. The total sample size was divided proportionately to the selected clusters and to both sexes (male and female). Accordingly, males and females were selected based on percentages calculated. Finally, a simple random sampling method was applied to select males and females from the cluster selected for the study after dividing the cluster in to male and female groups.

Data Collection Instruments: A pretested and structured self-administered questionnaire was employed. This questionnaire was partly adapted from demographic and health survey, behavioral study survey and other relevant sources.

Data Quality Control: The questionnaire was prepared in English and data collectors are campus level students/teachers. Data collectors were trained on data collection process for 02 days. Both sexes of data collectors were participated in data collection to decrease embarrassment due to the nature of the questions. Daily based supervision for completeness and consistency during the field was implemented by the researchers. Moreover, the validity of the tools, procedure of the research, and the feeling of subjects, all were checked by a pilot study that was done at Wachamo University on 5% of the actual sample size, the institution almost on similar status to the study subjects of this campus and few parts of tool was revised according to the pilot study.

Methods of Data Analysis: Analysis plan was developed by principal investigators. Numerator and denominator of key variables of the study were identified. Epi Info template was developed and data was entered using this statistical package. Analysis was done using SPSS version 20. Descriptive analysis was used to explain the findings.

Ethical Considerations: Ethical permission for the study was obtained from RCS Office of WKU. Written informed consent of the participants was taken from each participant. Participation of subjects was depend on their voluntariness and participants were informed the possibility that they can withdraw from the study at any stage of the interview without any precondition or explanation. Confidentiality of the participants were kept at all times. We did the interviews in an area with maximum privacy for the study respondents.

RESULTS

Among the eligible ones, a response achieved by the assessment was from 1123 students, having a response rate of 95%. The mean age of the study subjects was around 20 years with a standard deviation of about 1.78 years.

Socio-demographic information: The dominant number of the students' accommodated in dormitory, 988(88%). On the other hand, majority of the students were males, 729(64.9%) and nearly all of the students, 1080(96.2%) were young people (Table 1).

Students and family background: This assessment revealed that about quarter of the students grow up in large cities (Addis Ababa and regional capitals), 281(25%) as can be disclosed below (Table 2). In this emerging university ever use of substance reportedly was somewhat higher than a quarter, 28.7% (322) from a total of 1123 students. Among students reported ever use of substances, alcohol consumption was the predominant one, 157(14.0%), followed by khat, 57 (5.1%) as can be seen from summarized (Table 3) below.

Sexual practice: The mean age for the first sexual intercourse was 18 years with SD 2years. Moreover, 9 (14.1) of the students started the first sexual intercourse at ≤ 18 years. The commonest reason to delay sexual practice among the participants was religion, 476(42.4%) followed by fear of STI

including HIV/AIDS. Moreover, 490(43.6%) of the students reportedly said that they would delay sexual contact till the intended period of marriage (Table 4 and 5).

Magnitude of induced Abortion: According to the assessment, 99(25.1%) of the female students reported that they had history of abortion but 295(74.9%) did not (Figure below). All of these abortion cases were self-initiated/induced abortion ones.

Abortion frequency & reasons: Reportedly, maximum number of the female students, 58(5.2%) performed induced abortion and major reason was not to disturb educational activities (Table 6).

Risk of HIV infection and risky sexual behavior: Among the study participants 702(62.5%) had have knowledge on HIV/AIDS, however 236(21%) of the students experienced sexual intercourse. Among these, only 57(53.8%) always use condom. The overall aggregated risky sexual behavior of the students was 225(20%) and currently 7(1.5%) of the students were HIV positive (Table 7).

DISCUSSION

This assessment, which determined the risky sexual behaviors of the students based on varied several variables, was achieved with 1223 students. The study examined to what extent the students are found in risky situation regarding HIV/AIDS, premarital sexual, use of induced abortion, multiple sexual partnership, level of substance use and so on. Sexual practice: The mean age of the first sexual exposer among the 236 students who started sexual act was about 18 years that was nearly the same to a study in Brazil, 19.8 for females and 20.4 for males (Int J Gynaecol Obstet.2010), 17.47 in Turkish university (Kothari, Monica, 2012), average age for sexual debut of 16 years in South Africa (Born, 2015), and compared to Ethiopian university, it was exactly similar with 18.25 in Debreworkose university (Mamo, 2016), Axum university, 18 years (Lerebo, 2015), and nearly equal with the mean age at first sexual intercourse in Jimma university of 17.7 ± 2.7 years (Gurmesa Tura, 2012).

Moreover, the prevalence of sexual intercourse among the students, 21% (236) restated nearly similar result with a study in five universities of 29.71% (Desalegn tigabu, 2012), Jimma University, 26.7(26.9%) (Gurmesa Tura, 2012), and Axum university of 19.2(30.2%) (26). But the magnitude or the prevalence of students ever had sexual intercourse 21% (236) was much lower in comparison with a study in Brazilian university of 69.7% for males and 48.4% for females (IJOG, 2010), Turkish university of 33.8% students (Zehra Golbasi, 2015), 37% students in South Africa (Born, 2015), in Mizan-Tepi, 41.9% students ever had sexual intercourse (Henok, 2015), in Debreworkos University, 28.2 (44.7%) students (Mamo, 2016), and Axum university Shire campus of 60% students (Kebede, 2018).

Risk of HIV infection and risky sexual behavior: The aggregated risky sexual behavior of the students, 225(20%) was almost similar to Axum university Shire campus 107(17%) students' risky sexual behavior (Lerebo *et al.*, 2015), but it was higher relative to Sri Lanka prevalence of risky sexual behavior, 12.4% (Perera and Abeyseena, 2018). whereas significantly lower than Kenya, 66% of students engaged in risky sexual behavior (Dennis, 2012). Regarding condom use, only 57(53.8%) of students in this study always used condom which was lowest while coming to Brazil, 80.4%

Table 1. The Socio-Demographic Characteristics of the sampled students in Wolkite University, n=1123, April 2018

Variables		Frequency	Percent
Sex of students	Male	729	64.9
	Female	394	35.1
	Total	1123	100.0
Religion	Orthodox	688	61.3
	Catholic	27	2.4
	Protestant	225	20.0
	Muslim	170	15.1
	No religion	8	.7
	Others	5	.4
	Total	1123	100.0
Age in years	10-19 years old	230	20.5
	20-24years old	850	75.7
	>=25 years old	43	3.8
	Total	1123	100.0
Your mother's educational status:	Illiterate for modern education	410	36.5
	Can read & write	311	27.7
	Grade 1-8	213	19.0
	Grade 9-12	99	8.8
	Grade12+	90	8.0
	Total	1123	100.0
Your father's educational status:	Illiterate for modern education	278	24.8
	Can read & write	331	29.5
	Grade 1-8	205	18.3
	Grade 9-12	105	9.3
	Grade 12+	204	18.2
	Total	1123	100.0

Table 2. The background information of sampled students and their families in Wolkite University, n=1123, April 2018

Variables		Frequency	Percent
Place of grow up	Addis Ababa	163	14.5
	Regional capital	118	10.5
	Zonal town	144	12.8
	Wereda town	310	27.6
	Other town	47	4.2
	Rural	341	30.4
	Total	1123	100.0
Place of grade completed from 1-8	Public school	932	83.0
	Private school	176	15.7
	Others	15	1.3
	Total	1123	100.0
Place of grade completed from 9-10	Public schools	866	77.1
	Private schools	248	22.1
	Others	9	.8
	Total	1123	100.0
Place of completed from 11 & 12	Public	866	77.1
	Private	248	22.1
	Others	9	.8
	Total	1123	100.0
Your parents or guardian residence:	Addis Ababa	132	11.8
	Regional Capital	110	9.8
	Zonal capital	185	16.5
	Wereda capital	271	24.1
	other towns	53	4.7
	Rural	372	33.1
	Total	1123	100.0
Students' academic year of study	Year I	386	34.4
	Year II	313	27.9
	Year III	295	26.3
	Year IV	85	7.6
	Year V	44	3.9
	Total	1123	100.0
Student's Current place of accommodation	Dormitory	988	88.0
	Outside campus with parents	57	5.1
	Outside campus on rental	17	1.5
	Both dormitory & outside	61	5.4
	Total	1123	100.0
Which group do you belong now?	Non-Cafe	262	23.3
	Cafe	861	76.7
	Total	1123	100.0

Table 3. Substance use among sampled students of Wolkite University, n=1123, April 2018

Variables		Frequency	Percent	
Substance/Drug Users	Smokers	44	3.9	
	Alcohol consumers	157	14.0	
	Khat users	57	5.1	
	Hashish users	21	1.9	
	Shisha users	15	1.3	
	Drug users	15	1.3	
	Others	13	1.2	
	Total	322	28.7	
Non users	No substance use			
		Total	801	71.3
		Total	1123	100.0

Table 4. The first sexual practice at University level among sampled students of Wolkite University, n=1123, April 2018

Variables		Frequency	Valid Percent	Cumulative Percent
Sexual practice at University	First year	43	3.8	3.8
	Second year	152	13.5	17.4
	Third year and above	41	3.7	21.0
	None	887	79.0	79.0
	Total	1123	100.0	100.0

Table 5. The planned period and reasons to delay the sexual act among sampled students of Wolkite University, n=1123, April 2018

Variables		Frequency	Percent
Reasons not to start sexual act	Religious reason	476	42.4
	Economic	111	9.9
	Lack of desire	88	7.8
	Fear of STI/HIV	148	13.2
	Other reason	64	5.7
	Total	887	79
	99	236	21.0
Planned period to start sex?	Total	1123	67.6
	After graduation	117	10.4
	After marriage	490	43.6
	I don't know	230	20.5
	other undecided time	50	4.5
	Total	887	79
	99	236	21.0
Total		1123	100.0

Table 6. Abortion frequency & reasons among sampled students of Wolkite University, n=1123, April 2018

Variables		Frequency	Percent
Frequency of abortion practice	One	58	5.2
	Two	22	2.0
	Three and above	19	1.7
	Total	99	25.1
	No abortion	295	79.9
Reasons for having an abortion	Total	394	100.0
	Not to disturb education	37	9.32
	Too young to bear child	27	6.8
	Partner refusal of the pregnancy	12	3.03
	Fear family and society	12	3.03
	Violence/rape	4	1
	Unplanned pregnancy	1	0.25
	Unprotected sexual intercourse	5	1.25
	Others	1	0.25
	Total	99	25.1

of males and 74.8% females (IJOG, 2010), in five Ethiopian universities, 73.4% of the students (Desalegn tigabu, 2012), Mizan-Tepi University, 60.5% of the students (Henok, 2015), and 69.1% among Jimma university students (Gurmesa Tura, 2012). But the use of condom was higher compared to 37%, in Zambia University (Menon, 2016). The multi-sexuality situation of the students, 180(76.2%), was convincingly higher than Turkish study of 59.3% (Zehra Golbasi, 2015). Jimma University 28.3% of the students (25), Shire campus of Axum University, 112 (64.4%) had multiple sexuality

(Kebede, 2018), in Markose university multiple sexual partner situation of 73(44.5) (Mamo, 2016), and the result was by far higher than 27% in Mizan-Tepi university (Henok, 2015), among five Ethiopian universities, 281 (31.0%) of students who had multiple sexual partner (Desalegntigabu, 2012), Zambia University 12% and 24% of females and males (Menon, 2016), and larger to Indian university, currently 7(1.5%) were HIV positive, In Indian, 0.07% of girls and 0.01% of boys were found to be HIV positive (Maliye, 2017). Substance use: The dominant finding of substance ever use in the assessment was

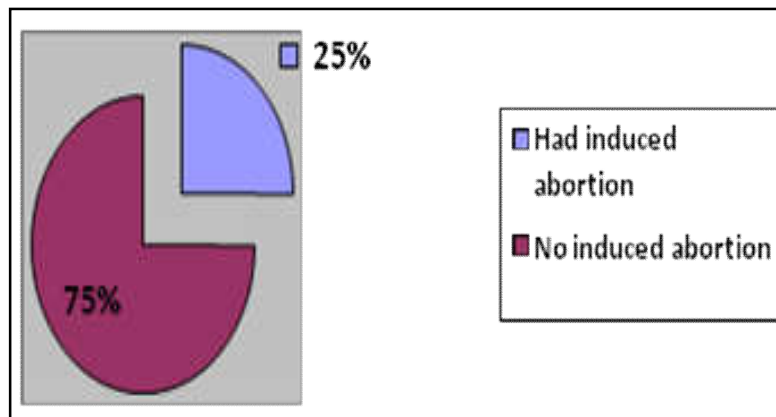


Figure which shows the Magnitude of induced Abortion among sampled students of Wolkite University, n=1123, April 2018

Table 7. Risk of HIV infection among sampled students of Wolkite University, n=1123, April 2018

Variables		Frequency	Percent
Knowledge on HIV/AIDS	Yes	702	62.5
	No	421	37.5
Ever sexual intercourse	Yes	236	21.0
	No	887	79.0
If yes, with whom did you first have sex?	With boy/girl friend	114	48.7
	With teacher	30	12.8
	With husband/wife	12	5.1
	With outsider/outside school/university	31	13.2
	Business man/woman	31	13.2
	With commercial sex worker	9	3.0
	Others	9	3.8
	With how many persons had sexual experience so far	1	56
	2	123	52.1
	3	56	23.7
	4	1	0.4
Have you ever used condom?	yes	106	44.2
	No	130	55.8
Did you use condom when you had sex at first time?	yes	64	60.4
	No	42	39.6
How frequently did you use condoms?	Always	57	53.8
	Occasionally	34	32.1
	Rarely	15	14.2
Did you use condom during your last sexual act	Yes	82	77.2
	No	26	22.8
Why did not use condom	Not easily accessible	24	19.0
	Not comfortable	41	32.5
	Partner objected	18	14.3
	In hurry	15	11.9
	Embarrassed to buy or ask for	11	7.1
	Didn't think it was necessary	10	7.9
	others	9	7.1
Ever HIV test	Yes	504	44.9
	No	619	55.1
Knowing the HIV test status	Yes	462	91.7
	No	42	8.3
Result	Positive	7	1.5
	Negative	435	94.2
Aggregated risky sexual behavior	Yes	225	20.0
	No	898	80.0

alcohol consumption, 157 (14.0%) of students consumed alcohol followed by khat, 57 (5.1%). This was very much lower than ever use of substance in five Ethiopian universities, 25.8% (Desalegnitigabu, 2012) and Botswana 816 (42.1%) students consumed alcohol (Riva, 2018)

Conclusion

The findings of this study is expected to hold inputs for activities aimed at incorporating strategies and guidelines targeted to improve sexual orientation of youths or adolescents in the country as a whole and this campus in particular that could be taken as a reference at this crucial period of already launched and mid-term strategic plan of youths at minister

level. The institute needs substantial progress in availing youth friendly reproductive health services as huge number of the youngsters, 225 (20%) had risky sexual behavior and currently 7 (1.5%) were HIV positive.

Recommendation

Despite the need for consideration of multiple strategic approach for the improvement of sexual orientation or risky behavior of youngsters in this institute, it is pivotal to have behavioral change communication for its strong positive effect on informed decision making. Moreover, services for youths should be friendly and available with skillful professionals.

This can be realized through the effort of tremendous stakeholders in the compound and elsewhere in the country like ministry of education/health or non-governmental organizations. To bring improvement in the health of youngsters, these level managers may assess and strengthen student's clinic service which should address youth friendly service packages through adequate resource allocation and monitoring and evaluation of services after strong commitment on information dissemination and communication. Service area workers/health professionals should have huge responsibility in bringing fascinating changes minimizing risky behavior of youngsters, minimizing or eradication of abortions, and above all behavioral change communication and careful expansion of youth friendly sexual and reproductive health service.

In addition, due emphasis has to be given for mass mobilization, monitoring and evaluation of youth's program by arranging review meeting with respective offices & youth representatives. The other most important point here for experts or any interested researchers at all levels is initiating further studies that include qualitative insight or attitude of care givers or quality package issues and associated factors of these situation.

List of Abbreviations

RSB: risky sexual behavior; **WHO:** World Health organization

Declarations

Ethics approval and consent: Ethical approval was obtained from the institutional research ethics review committee of Wolkite University. Furthermore, verbal informed consent was obtained from each respondent before commencement of the interview. Respondents were assured of confidentiality of whatever information they will provided.

Consent for publication: Not applicable

Availability of data and materials: Please contact author for data requests

Competing interests: The author declare no conflict of interest with anybody

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Authors Contributions

All authors have made substantial intellectual contributions to conception, design, and acquisition of data, analysis and interpretation of data to this study. They also have been involved in drafting the manuscript, approved the final manuscript and agreed to be accountable for all aspects of the work

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