لم يتم ادخالها الى المستودع
الرقمي

بسم الله الرحمن الرحيم

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Department of Nursing

Prevalence of HIV among pregnant women in Hospital in River Nile State

Research submitted for partial fulfillment

Of requirement B.S.C Degree nursing sciences

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25

الآية الكريمة

بسم الله الرحمن الرحيم

قال تعالى:

(يأيها الذين أمنو لا تتبعوا خطوات الشيطان ومن يتبع خطوات الشيطان فإنه يأمر بالفحشاء والمنكر ولولا فضل الله عليكم ورحمته ما ذكى منكم من أحد أبدا ولكن الله يزكي من يشاء والله سميع عليم)

الآية (21) سورة النور

Dedication

To those

Who dive us the best of life

Without payment

To our parent for their patience and

Support

To our teachers

To all our friends

Acknowledgement

All thanks to Allah from the start to the end

And pray for prophet

Mohammed peace of Allah be upon him

We would like to acknowledge the contribution of our supervisor

Dr: Alwathig Yahiya Mohammed Nour

Who guide us throughout our way and helped us to make this research as make this research as accurate and

Useful as possible

And we are grateful to our beloved friends whom shared us

Happiness and sadness

And to all those who contributed their time and helped us

Our college and our teachers

ABSTRACT:

Back ground: HIV is major public health problem globally the study aimed to estimating the prevalence of HIV among pregnant women in River Nile state during period from (March-July) 2018.

Objective: to assess prevalence of HIV in pregnant women in River Nile State.

Method: this study is descriptive hospital base study design in River Nile state, north of Sudan, population in this study estimated to be more than one million people among pregnant women attending delivery room includes 384 pregnant women, through prepare questionnaire by take secondary data from delivery room after consent from pregnant labor.

Result: the data will be managed by SPSS by statistic program windows. Out of 384 pregnant women 7 found to be HIV positive with sero prevalence rate of 1, 8. Majority of sero positive women (18,5 %) were done tattoo procedure and secondary educational level (36.2 %).

Conclusion :The study conclude that prevalence of HIV among pregnant women in river Nile Stat were low among those under growing test of HIV as routine investigation even normal delivery and cesarean scion according our risk factor of HIV based on our analysis significant between tattoo and level of education .

مستخلص الدراسة (البحث):

المقدمة: فيروس نقص المناعة البشرية هو مشكلة الصحة العامة الرئيسية على مستوى العالم تهدف الدراسة الى تقدير انتشار فيروس نقص المناعة البشرية بين النساء الحوامل في ولاية نهر النيل في الفترة ما بين (مارس – يوليو) 2018 .

الطريقة: الدراسة عبارة عن دراسة مقطعية مستعرضة لسكان ولاية نهر النيل في شمال السودان التي يقدر سكانها بحوالي اكثر من مليون نسمة بين النساء الحوامل اللائي يحضرن غرفة الولادة وتشمل 384 امرأة حامل من خلال اعداد استبيان عن طريق اخذ بيانات ثانوية من غرفة الولادة بعد الموافقة من النساء الحوامل.

النتيجة: تمت ادارة البيانات بواسطة نوافذ البرنامج الاحصائي **spss** من 384 من النساء الحوامل 7 ثبت ان فيروس نقص المناعة لديهن ايجابي مع معدل انتشار 1.8% .غالبية النساء الإيجابية قمن بعمل الوشم بمعدل 18.5% و من المستوى التعليمي الثانوي بمعدل 36.2%.

الخاتمة : تضمنت الدراسة ان انتشار فيروس نقص المناعة البشرية بين النساء الحوامل في ولاية نهر النيل كان منخفض. من بين اولئك الخاضعات للاختبار المتنامي لفيروس نقص المناعة البشرية كتحقيق روتيني للولادة الطبيعية والعملية القيصرية وفقا لعامل خطورة المرض ، بناءً على تحليلنا بين الوشم والمستوى التعليمي .

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List of abbreviations

Symbols	Means
AIDS	Acquired immune deficiency syndrome
ARV	Anti-retroviral
BHS	Public health service
HIV	Human immune virus
NACO	National association of counties
PCP	Pneumocystis Carinii pneumonia
PMTCT	Prevent mother to child transmission
SCB	Sriran Chandra bhang
SNAP	Sudan national Aids program
UNAIDS	United national Aids program
WHO	World health organization

Chapter One

1.1 Introduction:

Human Immune Virus (HIV) in pregnancy is the presence of the HIV virus in a women while pregnant there are concerns because women diagnosed with HIV may transmit the infection to their child during pregnancy, childbirth, breast feeding [1]. One of the obstacles to treatment of human immunodeficiency virus is high geuatic variability [2]. HIV is present in semen, vaginal/cervical secretion and blood, and these are the main vehicles by which the virus is transmitted, the virus may also be present in saliva, tears, urine, breast milk, cerebrospinal fluid and ineffective discharge [3].

The prevalence of HIV is nearly 37 million people in 2016 worldwide, of these 2.1 million were children according to United National Aids Program (UNAIDS).

Africa is the most affected region by HIV in the world, particularly among young women, in 2015 close to 26 million people were living with HIV in Africa, 2.3 million of these were children ,Countries in southern Africa, with the exception of Angola, have the highest HIV prevalence rates among antenatal clinic attendees aged 15 to 24 years , varying from 17.4% to 39.4% ,most countries in western Africa continue to have levels of HIV prevalence rates below 5% and with stable HIV prevalence trends , in southern Africa countries HIV prevalence is high at rates 25% according to World Health Organization (WHO).

In Sudan October 23, 2016 (KHARTOUM) the World Health Organization (WHO) said that there around 56,000 people living with HIV in Sudan , including 3500 child and 2300 pregnant women.

1.2 RESEARCH PROPLEM:

-In River Nile State there is fewer information or data of HIV among pregnant women.

-There is no information about prevalence of HIV among pregnant women important for medical staff including nursing dealing usually with delivery.

-To know HIV prevalence among pregnant women is important to prevent mother to child transmission program.

1.3 JUSTIFICATION:

The important of Research provide information to the Sudan National Aids Program (SNAP) in River Nile State that provides services of prevention mother to child transmission (PMTCT). The studies was done about HIV in pregnant women in River Nile before was fewer so such like this research will make great benefits to health program in River Nile State. New policy in Sudan compulsory pregnant women to do viral screening and syphilis implemented before 1 year in Sudan to protect neonate and medical staff.

1.4 GENERAL OBJECTIVE:

To assess prevalence of HIV in pregnant women in River Nile State in 2018.

1.5 SPECEFIC OBJECTIVE:

-to assess prevalence of HIV among pregnant women 2018 in Atbara and Eldamer teaching hospitals.

-to describe epidemiology Patten of HIV in pregnancy 2018 in Atbara and Eldamer teaching hospitals.

Chapter Two

LITERATURE REVIEW:

2.1 Definition:

It is a retrovirus, a type of virus that is still largely unknown HIV was first described in 1983 by medical researcher in Paris. It has had several names during its short histry but HIV has now been accepted internationally. The virus inters the T.helper of immune system. In the cells it destroys genetic material and the damage is permanent. All body fluid contain T.helper the concentration is high in blood, semen and the vaginal secretion Being HIV Positive or having HIV disease is not the same as having AIDS, many people are HIV positive but not sick for many years, this year's known as incubation period, As HIV disease continues slowly wears the immune system. Virus, fungi, parasite and bacterial that usually don't cause any problem can make you very sick, if your immune system is damaged [4].

2.2 Type of HIV:

The disease HIV can be divided into two types HIV1 and HIV2.HIV1 the most common and HIV2 relatively uncommon and less infectious, HIV1 related to viruses found in chimpanzees and gorillas' living in western African while HIV viruses are related to viruses found in the endangered west Africa proximate sooty mangbey[5].

2.3 Mode of transmission:

Sexual transmission: This is most frequent mode of transmitting HIV; the virus can be transmitted from an infected person to his or her sexual partner. **Exposure to infected blood** or **blood products**

Transfusion on infected blood or blood products.

Use of needle, syringe, knife and surgical instrument that may have been used on and infected person and not properly sterilized.

By exposure of cut and wound to infected blood or body fluid

Prenatal transmission: This may occur before, during or shortly after birth which represent 60%. The transmission of HIV from a HIV positive mother to her child during pregnancy, labor, delivery or breastfeeding is called mother to child transmission , in the absence of any intervention , transmission rates range from 15% to 45% this rate can be reduced to below 5% with effective intervention during period of pregnancy, labor, delivery and breastfeeding, these intervention primary involve antiretroviral treatment for the mother during pregnancy and immediate care to the newborn of women living with HIV this care include the host , immediate clamping of the umbilical cord, avoid airway aspiration , the earliest possible bathroom, not breastfeeding , the administration of antiretroviral (ARV) and vitamin K, and the reference to specialized assistance service (SAE)[6].

2.4 Microbiology:

It is an enveloped RNA virus belonging to lent virus subgroup of retroviruses, which cases slowly progressing diseases, often with long incubation period, and it consists of:

*An inner core containing two copies of single stranded RNA viral enzymes and capsid protein P^{24} (group specific core antigen which does not vary).

*Double layered lipid envelope, derived from the membrane of the host cell, the envelope contains virus specific glycoprotein gp^{120} and gp^{41}. These enable the virus to and infect host cell, Each HIV type is subdivided into different groups, referred

to as M, O and N. more than 90% of HIV infection belong to HIV-1 group M. Groups N and O are mainly limited to countries in west central Africa[3].

2.5 Pathphysiology:

The Human Immunodeficiency Virus of HIV is a retrovirus belonging to the family of lent viruses ,retroviruses can use their RNA to make viral DNA and are known for their long incubation period like other retroviruses HIV infects the body has a long incubation period and ultimately causes the signs and symptoms of disease, here AIDS causes severe damage to the immune system and eventually destroys it by using the DNA of CD4+ cell to replicate itself, in that process, the virus eventually destroys the CD4 + cell[7].

2.6 Treatment:

Currently used drugs:

A-Nucleoside Reverse Transcriptase Inhibitors

a-Zidovudine: also known as azidothymidine, is an antiretroviral medication used to prevent and treat HIV –ADIS it is generally recommended for use with other antiretroviral, it may be used to prevent mother to child spread during birth or after aneedlestick injury or other potential exposure, it is sold both by itself and together as lamivudine/zidovudine and abacavir/lamivudine it can be used by moth or by slow injection in to vein, other example: Zalcitabin, Iamivudine, Stavdudine.

B-Protease Inhibitors example: Squinaver, Indinaver[8].

2.7 Complication:

Human immune virus attacks the bodies with blood cell. This allows infection to take advantage of awakened immune system, and can lead to illnesses, cancer, or neurological problems (WEBMD) [9].

2.8 Prevalence of HIV:

Mary Lou Lindegren and et al conduct Study in 1994 by name trend in prenatal transmission of AIDS in the United States, aimed to describe trend in incidence of prenatal AIDS and factor contributing to these trend, particularly the effect of Public Health Service(PHS) prenatal HIV recommendation, the Study was descriptive Study design based on surveillance Data of HIV reported system through June 1998 ,the study found incidence of prenatally acquired AIDS in the United states has declined dramatically ,especially since the 1994 public health service prevention guidelines were published , the declined were greater than those excepted from declining births to HIV infected women and reductions in Pneumocystis Carinii Pneumonia (PCP) rates , the declining incidence of prenatal AIDS , coincident with the increasing use of zidovudine , is consistent with data from clinical trials and observational studies confirming the effectiveness of zidovudine in reducing perinataL HIV transmission[10] .

In India 2017, Dr Ajit Kumar Nayak and et al conduct study on prevalence of HIV infection among pregnant women attending antenatal clinic in a tertiary care hospital, Cuttack, India the study aimed Estimating the HIV seroprevalence in a low risk population such as pregnant women provide essential information for monitoring trend of HIV in general population and assist in prevention from mother to child transmission , the study was descriptive design conducted in SCB medical college and hospital ,cuttack,india between February 2014 to august 2014

which included 1600 pregnant women who attended antenatal clinic .blood sample collected after pretest counseling and informed consent , tested for HIV antibodies as pre NACO guidelines. First antibody test was ELISA. out of 1600 pregnant women, 8 found to be HIV – positive with seroprevalence rate of 0.5% .majority of sero positive women (87.5%) were in the age group of 20-30years .12, 5%were in 15-19 years of age .the seroprevalence was high in less than 20 years of age (1.9%), with higher reproductive history (2, 4%) and in illiterates (3%).Majority of HIV positive women's husband were migrants followed by truckers [11].

In Africa in Tanzania in 2008 Habib, and et al conduct study by title Maternal HIV status and pregnant outcomes in northeastern Tanzania, the study aimed to the proportion of women delivering with known HIV status in sub-Saharan Africa is not well described, risk of HIV transmission to newborns is a major concern. The study was descriptive study design hospital registry, the study was done in north east Tanzania (1999-2006), population singletons (n=14 444). The proportion of mother with known HIV status increased from 7% before 2001 to 78% after 2004. Single mother hood, rural residence, low maternal education, maternal and paternal farming and higher paternal age were associated with unknown HIV status .about 7.4 %(95%CI 6, 7-8, 1%) [12].

In Nigeria in 2015 okerentugba PO, Uchendu SC, Okonko IO conduct study of prevalence of HIV among pregnant women in Rumubiakan, Port Harcourt, Nigeria, the study aimed at determined the prevalence of HIV among pregnant women in rumubiakan, Nigeria. Blood sample were also collected from 200 pregnant women and screened for antibodies to HIV using determine HIV -1\2 and states pak HIV- 1\2 rapid strips. The overall of HIV prevalence of HIV was found to be 3,0%.the study however, further confirmed the presence of HIV -1 and -2 antibodies among pregnant women in port Harcourt, Nigeria[13].

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In Sudan October 2006 Abu-Bakr Mohammed ail Nasr and etal title study of prevalence of HIV infection among pregnant women of the central Sudan, the study was descriptive cross sectional, total population was 1138 only 305 consent to participate in study, only 3 women was positive HIV, in result of the study the prevalence of HIV in central of Sudan was 1%[14].

Chapter Three

METHODOLOGY:

3.1 Study design:

Descriptive hospital base study.

3.2 Study area & setting:

Atbara teaching hospital consist the following department (medicine, surgery, pediatric, obstetrics and gynecology, ICU,CCU ,clinical refer for ENT, pharmacy-laboratory , Xray , echo , ultrasound , renal unit).

Eldamer teaching hospital consist the following department (medicine, surgery, pediatric, obstetrics and gynecology, ICU, clinical refer for ENT, pharmacy-laboratory , Xray , echo , ultrasound , renal unit).

3.3 Study population:

Inclusion criteria any pregnancy women resend in River Nile State and attending delivery room in Eldamer and Atbara teaching hospitals.

3.4 Study sample size:

$$N=\frac{z^2 \times p \times q}{d^2}$$

N= sample size

Z^2= 1.96

P= prevalence HIV in pregnant

Q= (1-P)

d^2= (0.05)

$$N = \frac{(1.96)^2 \times 0.05 \times (1 - 0.05)}{(0.05)^2} = 384$$

3.5 Sample technique:

Randomly select form state hospitals which will select based on reprehensive criteria of locality pregnant women will select randomly

3.6 Data collection:

Data was collected through predesigned questionnaire after consent from pregnant women.

3.7 Data management:

Data will be mange through SPSS by statistics program windows

3.8 Ethical consideration:

Proposal will be approve from ELshelkh Abdullah Albadrei University, Faculty of health Science. Approval from ministry of health AIDS program will be obtained to collect the data from hospital. Informed consent will be obtained from participant as documentation of participation consent.

Chapter Four

Table (1): show distribution of participant according to their Age, Educationai level, Occupation, income level (N=384):

Variables	Description	Number	Percentage
Age	Less than 20 years	42	10.9%
	21---30	194	50.5%
	40 --- 31	116	30.2%
	More than 40 years	32	8.3%
Educational level	Illiterate	41	10.7%
	Khalwah	8	2.1%
	Primary	115	29.9%
	Secondary	139	36.2%
	Graduate	81	21.1%
Occupation	Student	6	1.6%
	House wife	351	91.4%
	Employee	20	5.2%
	Worker	7	1.8%
income level	Low	121	31.5%
	Moderate	259	67.4%
	High	4	1%
Total		**384**	100%

In the above table showed the common age among participant from 21-30 years (50.5%) and lower group of age was more than 40 years (8.3%). Secondary educational level was common among participant (36.2%) least group of education was khalwah (2.1%).

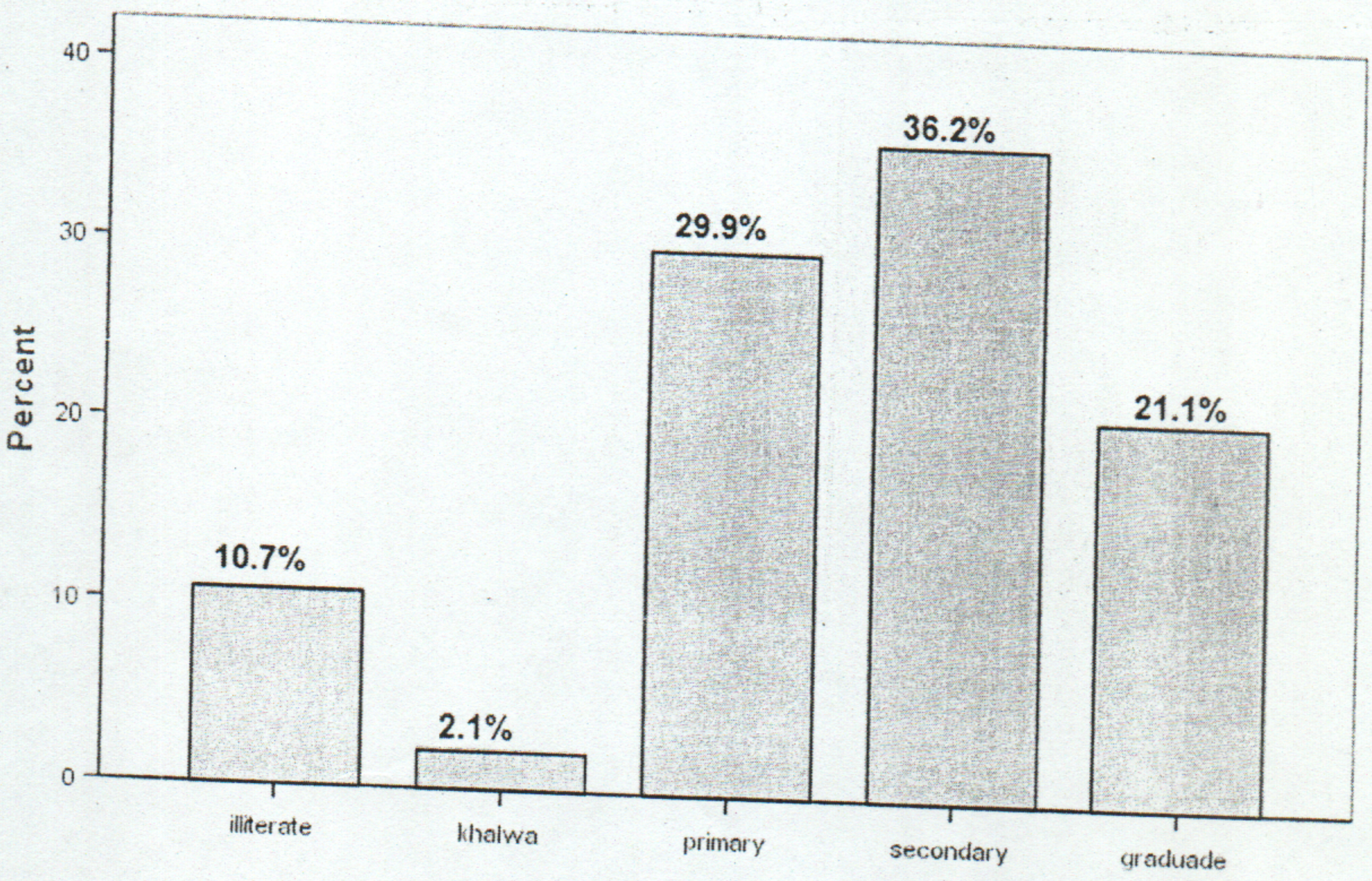


Figure (1): show distribution of participant according to their educational level (n=384)

Table (2): show distribution of participant according to their Tribe and resident (n=384)

Variables	Description	Number	Percentage
Tribe	Gaalia	239	62.2%
	Shawaiga	34	8.9%
	Manaseer	20	5.2%
	Nobaa	21	5.5%
	Rashida	16	4.2%
	Danagla	8	2. 1%
	Mahas	4	1%
	Halfawoein	1	0.3%
	Arab	16	4.2%
	Flata	3	0.8%
	Ababdaa	2	0.5%
	Hassania	5	1.3%
	Robatab	13	3.4%
	Janopeia	2	0.5%
Resident	Berber	35	9.1%
	Atbara	101	26.3%
	Eldamer	209	54.4%
	Atbara river	39	10.2%
Total		**384**	**100%**

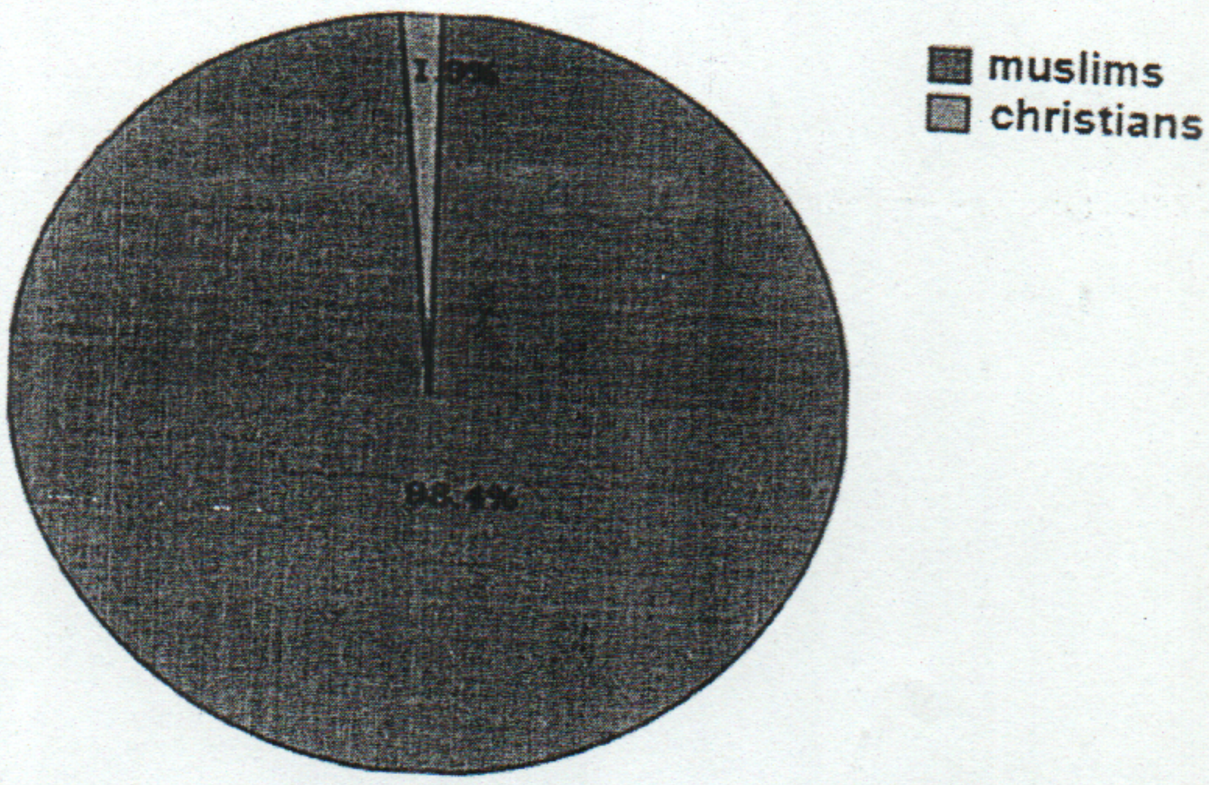


Figure (2): show the distribution of participant according to their religion (n=384)

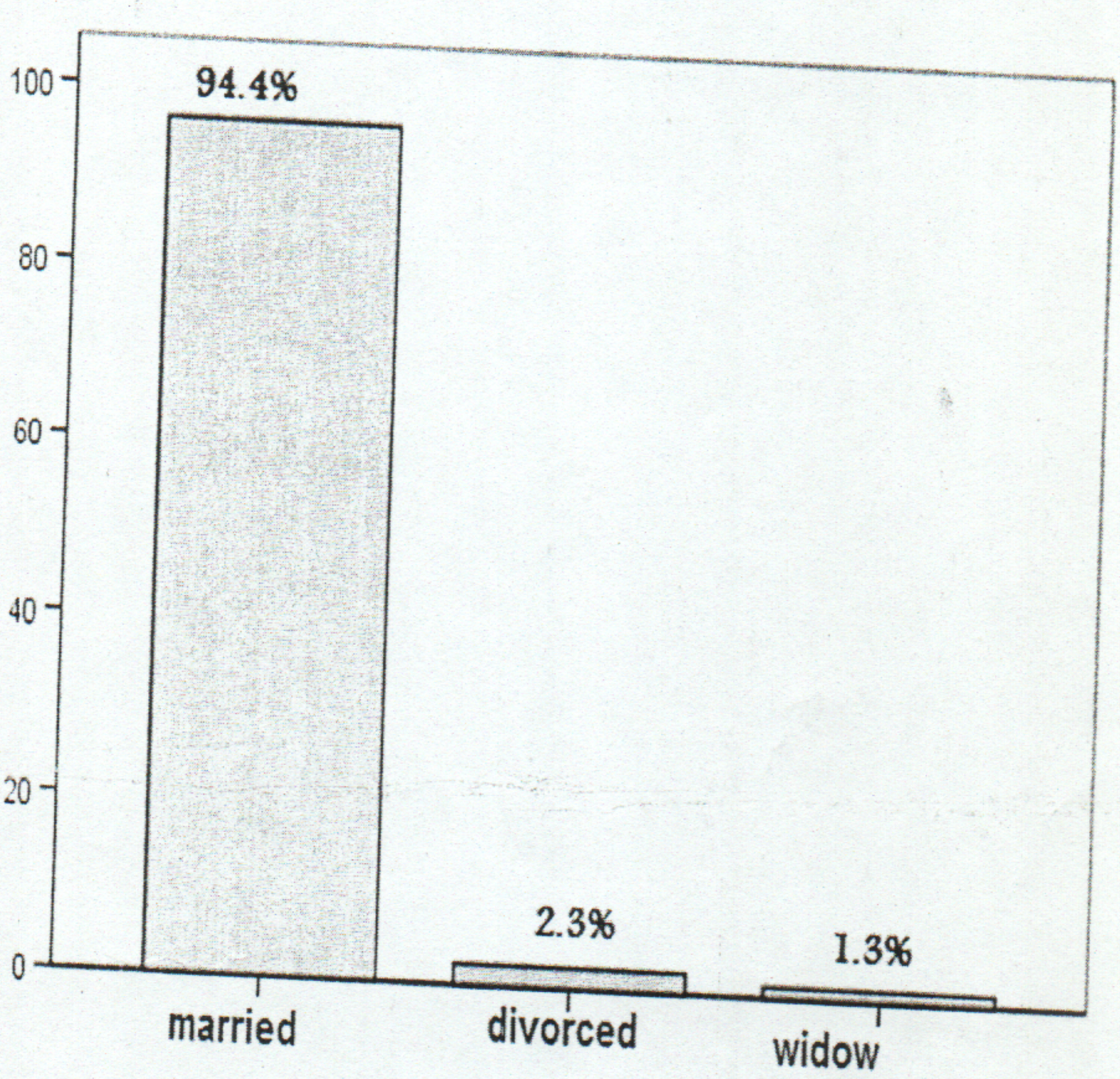


Figure (3): show the distribution of participant according to their material status (n=384)

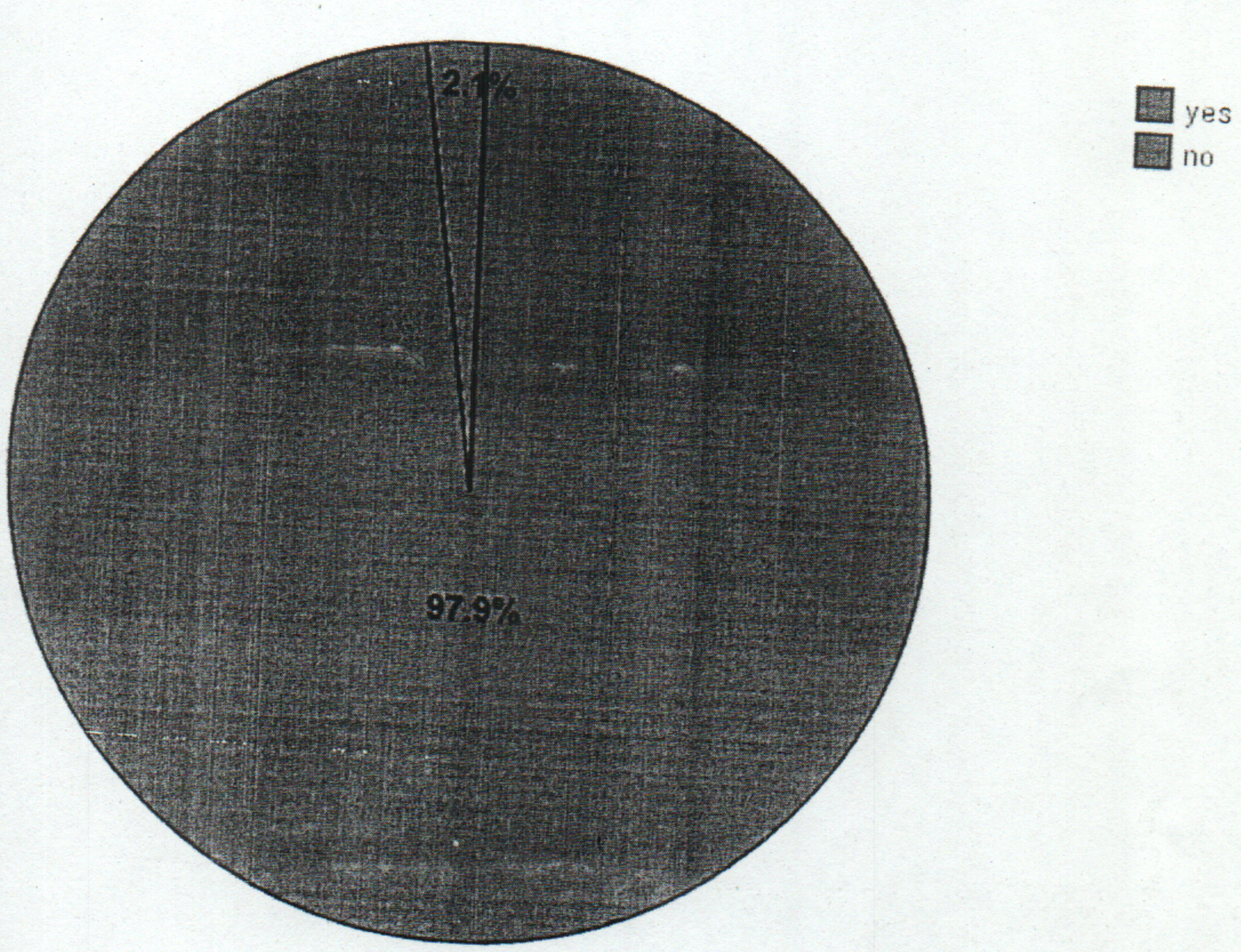


Figure (4): show distribution of participant according to previous test of HIV (n=384)

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Class. No
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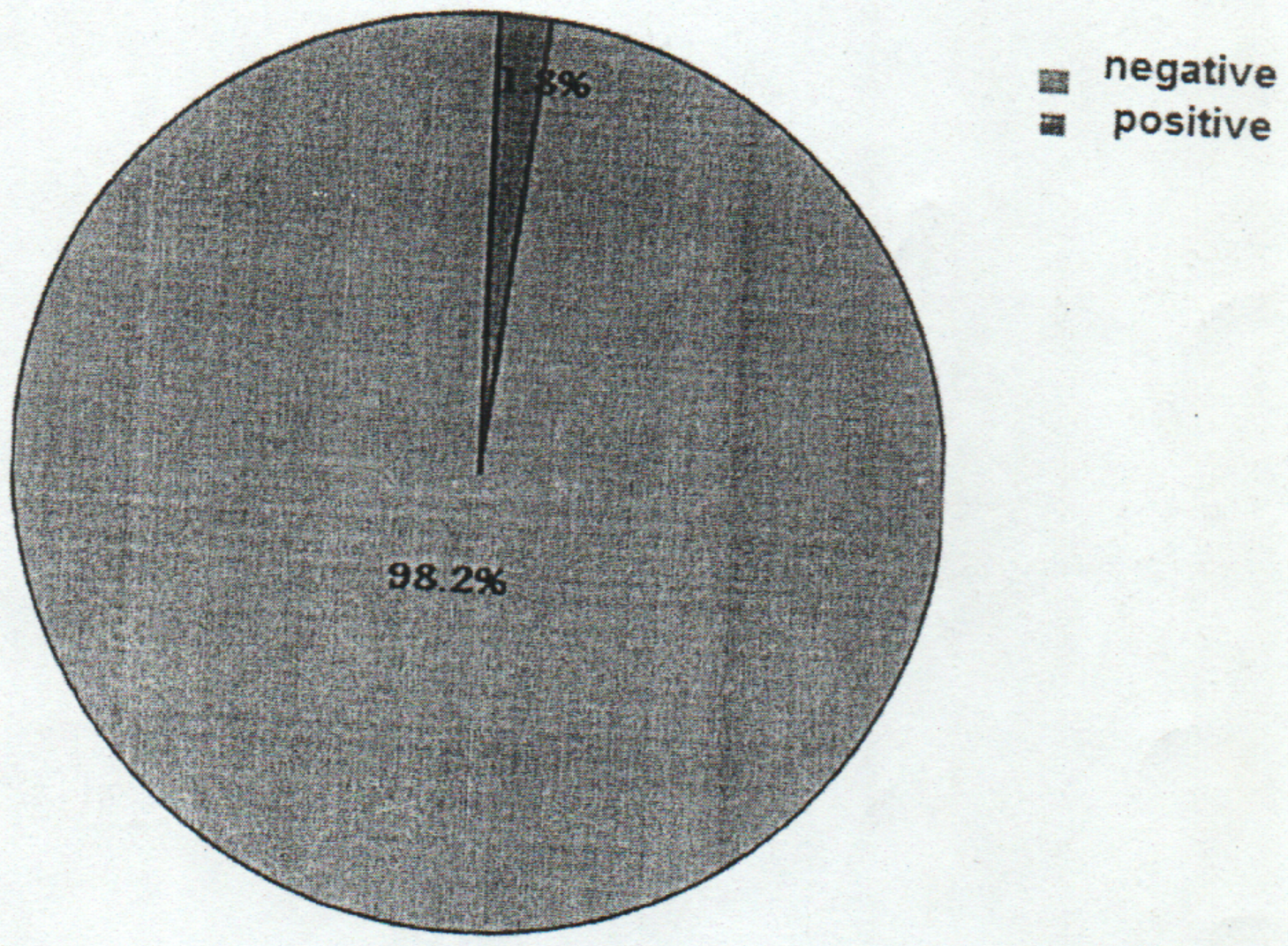


Figure (5) show distribution of participant according to their HIV status result

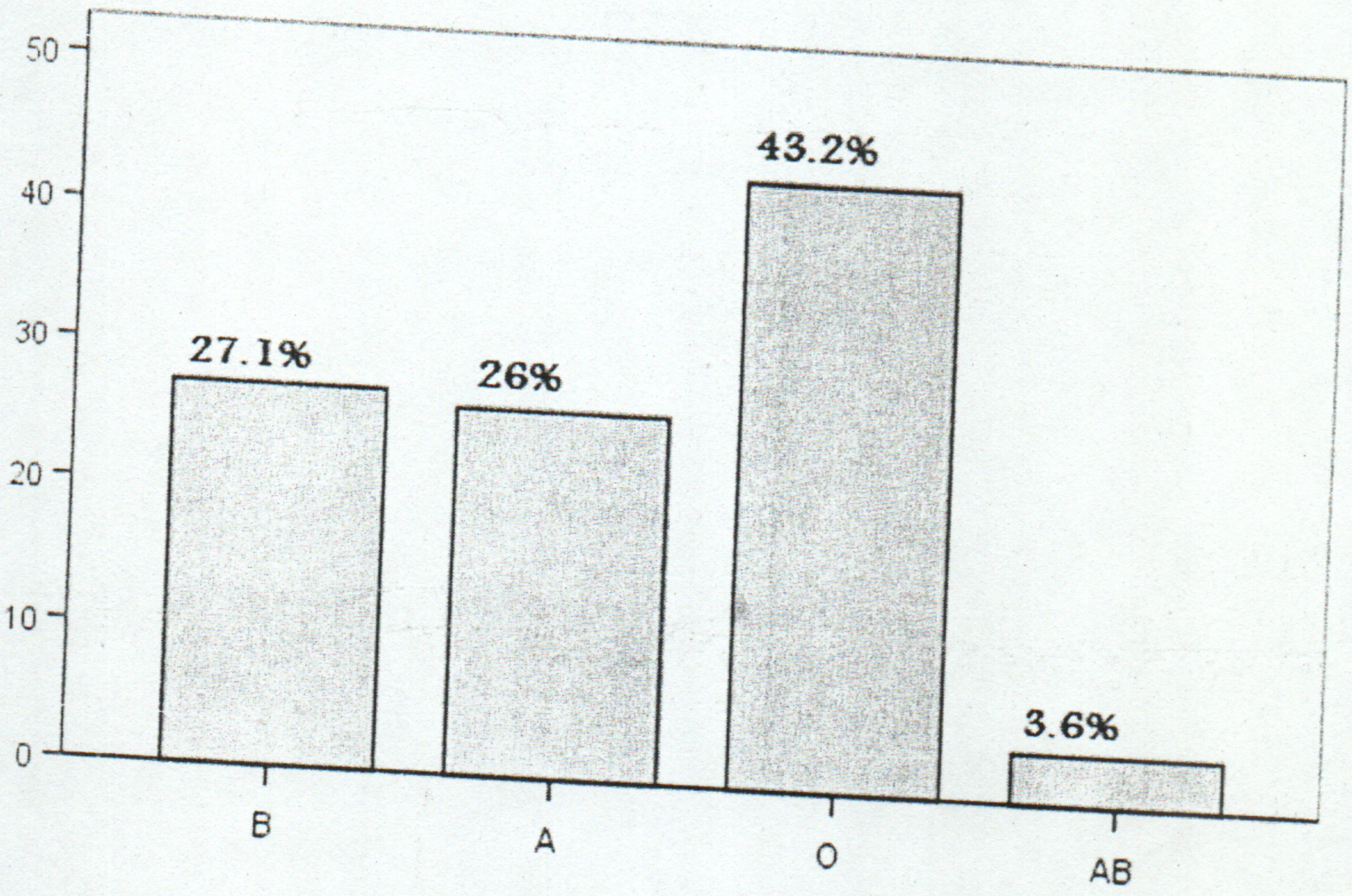
Table (3): show the distribution of participant according to gravidity (n=384)

Variables	Descriptions	Number	Percentage
Gravidity	Primary	72	18.8%
	Gravid tow	86	22.4%
	More than tow	226	58.9%
Total		**384**	**100%**

P-value(sig)= 0.563

Table (4): show the distribution of participant according to parity (n=384)

Variables	Descriptions	Number	Percentage
Parity	One	151	39.3%
	Two	34	8.9%
	More than two	199	51.8%
Total		**384**	**100%**



P-value(sig)=0,878

Figure (6): show the distribution of participant according to their blood grouping (n=384)

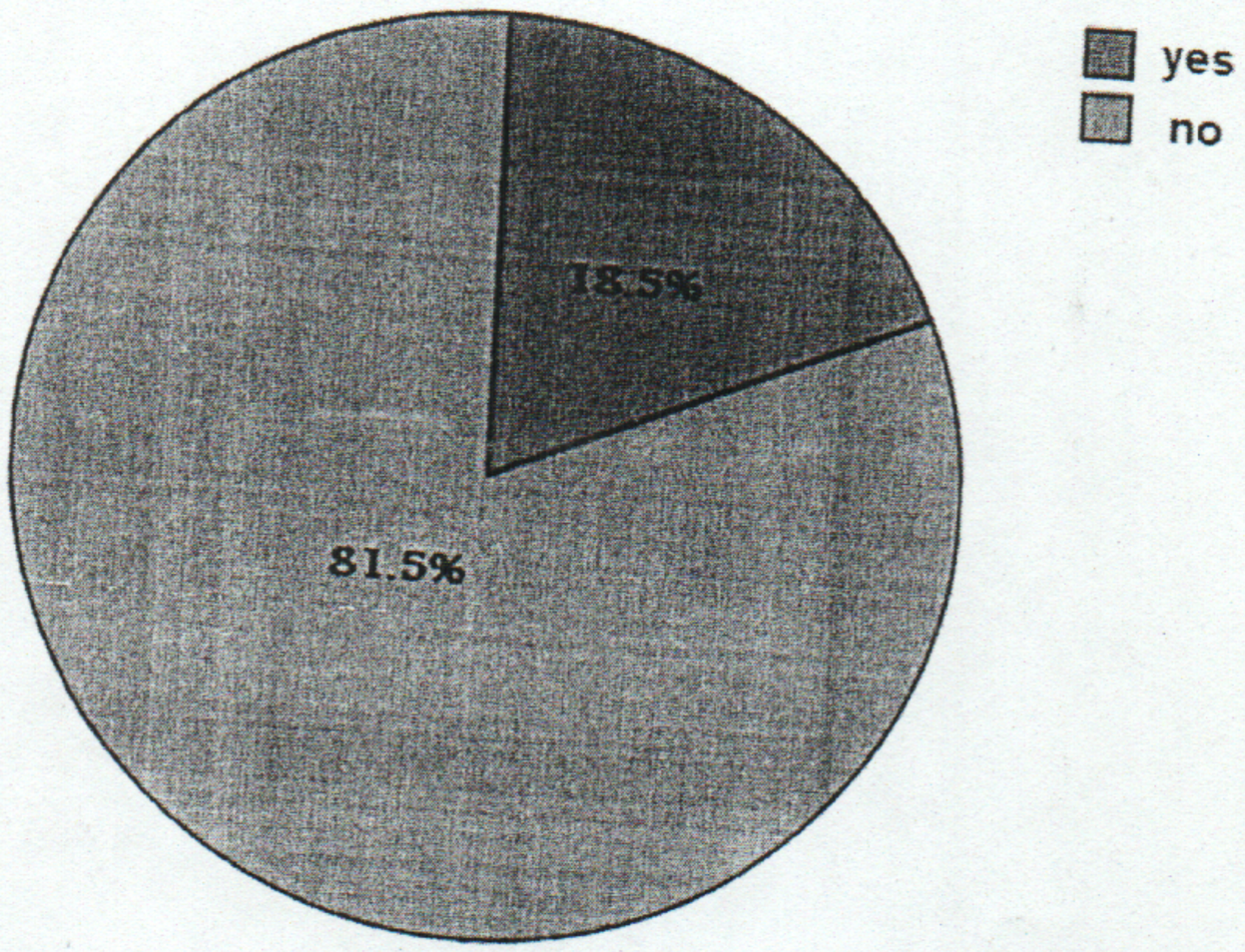


Figure (7): show the distribution of participant according to dental procedure (n=384)

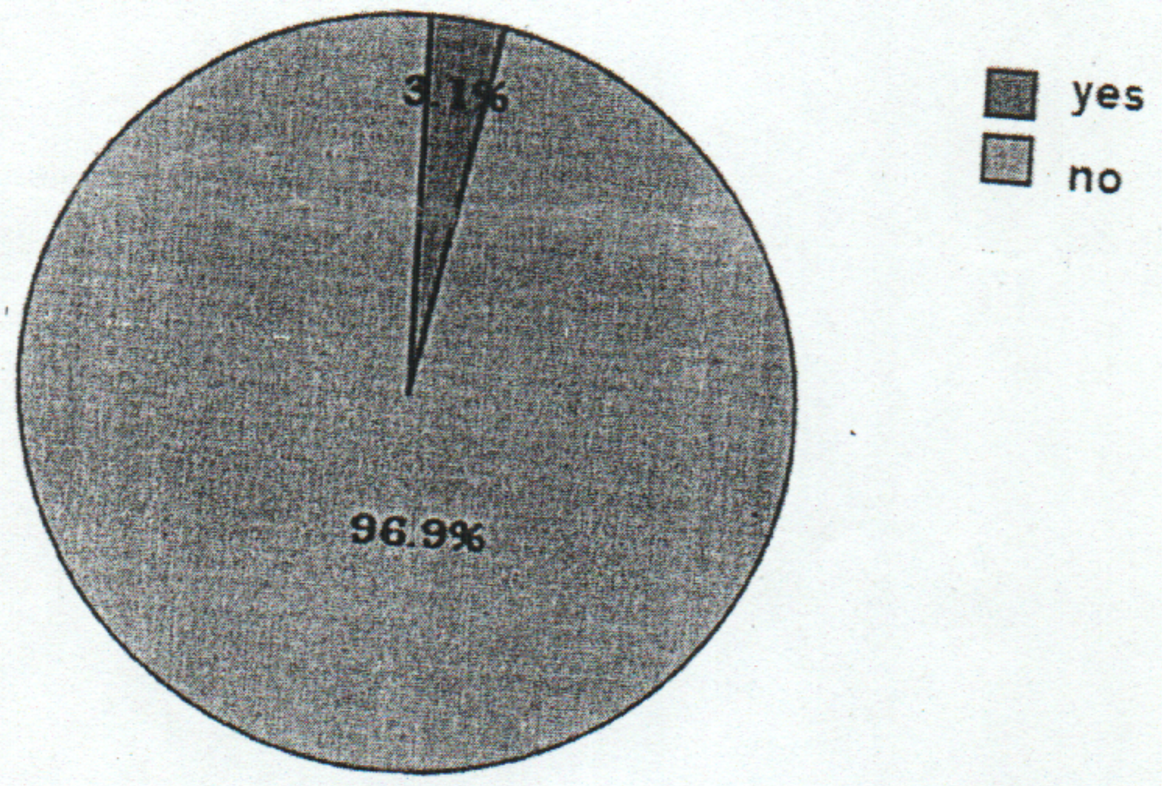


Figure (8): show the distribution of participant according to tattoo procedure (n=384)