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The Role of Sexual Behavior In The Transmission Of HIV and AIDS  
In Adolescent In Coastal Area

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**Abstract**

This study aims to analyze the role of sexual behavior in the transmission of HIV/AIDS in adolescents in coastal areas. This study is quantitative research with observational methods using cross-sectional approach. The study population was adolescents in high school aged 15-18 years. The sample of the research was chosen by random sampling at 200 students. Data collected is analyzed by quantitative methods with univariate analysis and narrative explanation. Results showed that the adolescents' knowledge related to HIV / AIDS in the coastal areas is high and the attitudes of HIV / AIDS is in the category adequate, it was not guaranteed that they have safe behaviour, which 15% of students had sexual intercourse, 6% of them using condom, only 7% of students had sexual intercourse with a girlfriend/boyfriend, 2% of students had sexual intercourse with prostitutes, and there are 5% of students had sexual intercourse with more than one person, there are 47% of students had masturbation, and 5% of students had STIs symptoms.

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Keywords: risky sexual behavior, adolescents, STI and HIV/AIDS, coastal area

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**1. Introduction**

One of the objectives of the Millennium Development Goals 2015, the 6th goal there are several indicators to be achieved, one of which is the percentage of people aged 15-24 who have comprehensive knowledge of HIV / AIDS to 95%. At the time of HIV & AIDS is a concern because of the increased number of events that continue to grow over time, especially in the adolescent age group. The fact that 57.8% of the AIDS cases that occurred in 2006 involving adolescent and young people aged 15-29 years were significantly shows that this group is specifically very vulnerable to HIV [1]

Adolescents or young people according to the United Nation are all people aged 10 to 24 years. Adolescents or young people are always want to know, quickly bored with the routine, enjoy group activities, and tend to follow their peers. Santrock (2007) revealed that adolescents (adolescence) is defined as a transitional developmental period between childhood and adulthood that include changes in biological, cognitive, and social-emotional. This resulted in teenager's easy to fall to promiscuity, drug abuse, fights and even criminal acts. These conditions can not be denied is closely related to the impact of technology flows among adolescents which is getting easy to access to pornography accompanied by an increase in unsafe sex behavior (free-sex) and injecting drug use that getting widespread. [2]

In the spread of HIV / AIDS there is an interesting phenomenon associated with the high cases in the coastal zone. The coastal zone has the potential to be used as a transit point for shipping, marine products trading, and other business activities, including commercial sexual transactions. So the mobility in the area is high, including in the context of transmission and spread of HIV / AIDS. In Indonesia, amount of the society in coastal area as traditional fisherman is included as low income population. This is the same result with the research which the title is *The Epidemiology of Herpes Simplex Virus Type 2 Infection in Low-Income Urban Populations in Coastal Peru* showed that In the socially marginalized population, Herpes Simplex Virus Type 2 (HSV-2) prevalence was 72.3% in men who have sex only with men (MSOM), 42.5% in women, and 20.7% in men. In the general population, HSV-2 prevalence was 20.5% in women and 7.1% in men. In all groups except the male general population, HSV-2 prevalence increased with age or number of sexually active years. HSV-2 infection was associated with HIV infection in MSOM and other socially marginalized men [3]. Puger subdistrict Jember District is a region in the southern area which is a coastal areas. The same with another place in developing country, the coastal area has amount of community in low income. Worldwide, societal shifts and behavioural patterns exacerbated by unique developmental vulnerabilities create a confluence of factors that place today's adolescents at heightened risks for poor health outcomes [4]. Unsafe sex is the second most important risk factor for disability and death in the world's poorest communities and the ninth most important in developed countries [5].

In Puger subdistrict there is a limestone mountain that supply the main materials for Puger Cement Factory. Beside that Puger has marine potential in form of fish and tourism. For fish potential, Puger is the only subdistricts in Jember that become the center of marine fisheries. While there are 2 beach tourism potential that is managed by the district government and the PT. Perkebunan Nusantara X region. As the center of economic activity and tourism, Puger region has become a destination for migrants from outside the region and from abroad. The workers in Puger Cement many originating from Korea and Thailand. On the other hand, the flow of information technologies through media such as television, mobile phones and the Internet also have an impact on people's behavior patterns in Puger, including adolescents. Permissive lifestyle that allows promiscuity can lead to increase the risk behaviors that lead to the spread of sexually transmitted diseases including HIV and AIDS. Meanwhile "taboo" cultural to discuss issues of sexuality and reproductive health in the family and society is still very attached. This is reinforced by the presence of the biggest ex-localization in Jember was in the Puger subdistrict. Although the Jember government has closed the Puger localization since 2007, but the practice of illegal prostitution still mostly found in the ex localization and some found in dimly lit stalls adjacent to residential areas.

The southern region of Jember District is the red zone of the spread of HIV / AIDS. This means that in the south there is a 5 subdistricts as the largest contributor to the discovery of cases of HIV and AIDS, which includes: the Puger, Gumukmas, Kencong Wuluhan and Ambulu subdistrict. Recent data reported by KPAD Jember Month December 2013 states that the number of HIV and AIDS in Jember reach 1115, where Puger subdistrict ranked first with HIV and AIDS cases reached 161, with the highest risk factor of heterosexual. By age group, that is included in the adolescent category at the age of 14-24 people reached 213 cases [6].

According to the conditions mentioned above, the researcher is interested in conducting research on how the sexual behavior of adolescents in the coastal areas of Puger subdistrict that have risk of HIV and AIDS infection.

## 2. Method

This study is quantitative research with observational methods using crosssectional approach. This research aimed to analyze how risky sexual behavior in transmission of HIV/AIDS in adolescents in coastal areas in the

Puger subdistrict Jember district. Independent variable of the research are individual characteristic, and dependent variable is behaviour in the transmission of HIV/AIDS in adolescent in coastal area in Puger subdistrict in Jember district. The place of the research is in the coastal area in Jember district at September-Desember 2013. The study population was adolescents in high school in the region of Puger subdistrict aged 15-18 years. The sample of the research was chosen by random sampling at 200 students. Based on the gender of the respondents there are 137 male students (68.5%), and 63 female students (31.5%). The data collected is analyzed by quantitative methodes with univariat analysis and narative explanation.

### **3. Results and Discussion**

#### **3.1.Overview of Study Sites**

The area of Puger sub district Jember district area located on the southern region which is directly adjacent to the south coast. There are 2 areas, Watu Ulo beach and Papuma beach, that become a tourist destination. Since 2010, Puger cement factory has established. In addition Puger subdistricts also have a limestone mountain that become the source of livelihood of the local population. Currently 24 companies are engaged in the processing of lime. Related to the exploitation of nature in the Puger subdistrict it is not surprising that there are so many immigrants coming into the Puger area. They not only aim to work but also in order to travel. In connection with these conditions, there are ex-localization in Puger. This localization has been closed by the local government, based on the SK Bupati Jember number 188.45/39/012/2007 on the closure of Social Services Transition for Commercial Sex Workers and Prostitution Closure In Jember. But in reality it is still found illegal prostitution in the area of Puger. These conditions directly affect the lives of local people, including adolescents. Because of the many migrants who earn a living, localization and the beach destinations, it make adolescents exposed to circumstances that are not ideal to support their growth and development, both physically and socially. As a result, adolescents get used by adults environment that is permissive to risk behaviors such as: free sex, drugs, and others.

According to Santrock (2004) adolescence is a time of sexual exploration and integrate sexuality into one's identity. Since HIV / AIDS cases are found in Jember, Puger subdistrict always ranked highest in case of discovery. Both from heterosexual adult age group who are married and from unmarried adolescents age with risk factors for heterosexual and homosexual. Intercourse that occur among teenagers is an extension of a general trend that leads to a permissive attitude toward sexual life that occur in the adult culture [2].

#### **3.2.Sexual Behavior In The Transmission Of HIV/AIDS In Adolescent In Coastal Area**

The results showed that adolescents knowledge related to HIV / AIDS in the coastal areas is high at an average of 85%. While knowledge of the symptoms of HIV / AIDS is in the category adequate with an average of 65%. At the research which the title is A Controlled-Study of Preventive Effects of Peer Education and Single-Session Lectures on HIV/AIDS Knowledge and Attitudes among University Students in Turkey showed that Statistical analyses reveal significant differences in knowledge and attitudes, personal behavior, and awareness of HIV/AIDS [7]. Knowledge is an important part in the formation of behavior. Behavior that is based on knowledge will be more lasting than the behavior that is not based on knowledge [8]. Knowledge is the antecedent of the behavior that provides the primary reason or motivation for the behavior [9]. Knowledge about HIV / AIDS of the respondents is quite high because they get information from electronic media such as the Internet. Because most of the students already have a mobile phone. Parents who have children in adolescents age are considered adults and were given mobile phones as a means of communication.

High level of knowledge about HIV and AIDS is very important for the respondent to have a positive attitude to prevent risky behaviors that can transmit HIV & AIDS. The attitude is the willingness or readiness to behave [8]. In terms of attitude, average of adolescents has a positive attitude towards prevention and testing for HIV / AIDS from an early age by 60%. With the high adolescents knowledge about HIV / AIDS and how to prevent it, will improve behavior of adolescents to avoid behaviors that lead to HIV infection and AIDS. Knowledge and attitudes of adolescents towards HIV & AIDS and its prevention is an important part in the lives of adolescents in taking the decision to behave safely (no risk of being infected with HIV and AIDS). It is like Widyastari research which states that media exposure is not influential, but an adolescents attitude that encourages a more permissive

attitude toward sexuality [10].

In terms of actions that lead to risky behavior in the transmission of STI and HIV / AIDS are: 15% of students had sexual intercourse. 6% of students had sexual intercourse using a condom, only 7% of students had sexual intercourse with a girlfriend, 2% of students had sexual intercourse with prostitutes, and there are 5% of students had sexual intercourse with more than one person, there are 47% of students have ever masturbation, and there are 5% of students who experienced symptoms of Sexual Transmitted Infection (STI). STI is caused by unsafe sexual behaviour likes : sexual intercourse with multipartners and without condoms.

STI is the entrance to the spread of HIV and AIDS. Because a person suffering from STI are very easy to wound and bleeding in the genital area, so the risk of transmission of HIV through blood contact is likely to occur. Approximately 80% of HIV cases are transmitted sexually and further 10% perinatally or during breastfeeding [11]. The infection of HIV by sexually is happened at man who buy sex ang his partners, sexual workers, Man Who Have Sex with Man (MSM) and his woman partner [12]. Epidemic of HIV/AIDS raised as the increasing of high risk behaviour likes : Injecting Drugs User (IDU) unsterilized, heterosexual behaviour without condoms and in small community at man who have sex with man without condoms [13]. The result of study on adolescent sexual behavior of high school students in the city of Denpasar, revealed that exposure to pornography, direct and indirect behaviors were significantly associated with the initiation of sexual intercourse before marriage [14]. Another study about the factors that influence sexual behavior Premarital Pekalongan Students 2009-2010 also stated the same thing that 11.9% of respondents do risky premarital sexual behaviour [15].

The results showed that risky behaviour is done by the respondents, most of them were men, amounting to 68.5%. This condition is in line with the investigations reported there was an association between sex with adolescents attitudes toward premarital sexual relations. Men tend to be more permissive toward premarital sexual intercourse than women [16]. This condition does away with the results of the study which states that adolescent males seem to do a lot more sexual activity than female adolescents [14]. This is consistent with studies in Factors associated with risk behaviors of Adolescent in Semarang in 2009 which states that adolescent males tend to behave at risk than females [17]. Another study also revealed the same facts to students at several universities in three cities in Central Java, Semarang, Solo and Purwokerto showed that 22% of male respondents and 6% of female respondents had had sexual intercourse [18]. Indonesian society in general, applying double standards in sexual behavior between men and women. Men are allowed to seek sexual experiences before and outside of marriage, while women should avoid such behavior. The norms of sexuality that is dominated by the norms of masculinity that emphasize sexual pleasure (sexual pleasure) of men, sexual ability (sexual powerness) and encourage men to have more than one sex partner (multiple partners) [19].

This study showed that the sexual behaviour of the adolescent in coastal area has big role in the transmission of HIV and AIDS. Although the adolescents knowledge related to HIV / AIDS in the coastal areas is high at an average of 85%, and the knowledge of the symptoms of HIV / AIDS is in the category adequate with an average of 65%, it was not guarantee that they have save behaviour in sexual intercourse. It is because of the reproductive health programmes on adolescent is not optimally. Sexual and reproductive health programmes can make an important contribution on HIV prevention and treatment, and that STI control is important both for sexual and reproductive health and HIV/AIDS control (Askew & Berer, 2003). Adolescents' views of and preferences for sexual and reproductive health services highlight promising direction and persisten challenges in preventing pregnancy and HIV and treating sexually –transmitted infections (STI) in this population [20].

According to the result of the research showed that behaviour of adolescents have potention to transmute HIV is possible to happen from sexual intercourse with their partner. The Health Minister of Indonesia reported that until the end of 2010, the proportion of AIDS cases is most happened at youth at aged 15-39 year (81,8%). It indicated that youth is risky population and important to be the target of the AIDS prevention programmes in Indonesia [21]. But the programmes of sexuality and health reproductive for adolescent is still limited and unpopular at the youth community, both of boys and girls, especially in coastal area at the Puger subdistrict that including as the low-income population. This condition is the same with the research showed that thirty-eight percent of adolescents had a previous 12 months. Low-income and full-year uninsured status were associated with higher risk for not receiving this visit [22]. After adjusting for STD/HIV risk behaviours, dating violence remains significantly associated with STD/HIV testing and diagnosis among sexually active adolescent girls [23]. The reproductive and sexual health education does not match the reality of sexual behaviour and sexual risk faced by teenagers because : (1) reproductive health and sexuality education that given to the high school level is more focused on the biological

aspects aloner, (2) there is still a notion that sexuality is a taboo to be given at school, (3) the sexuality education has not looked at the importance of aspects of gender relations and rights of adolescents in adolescent reproductive and sexual health [24]. Research indicates that current programs often do not match the needs and health-seeking behaviours of young people. Behavioral theories and expert opinion agree that adolescents must be taught generic and health-specific skill necessary for adopting healthy behaviors. Constraints on financial and human resources, coupled with the great size of the youth population, highlight the need to find less costly ways to reach young people [25].

#### 4. Conclusion and Sugession

The results of study about the role of risky sexual behavior in the transmission of HIV/AIDS among adolescents in coastal areas in the Puger subdistrict Jember district indicate that the role of adolescents risky sexual behavior that includes adolescents knowledge of HIV/AIDS, the symptoms of HIV/AIDS are at a high enough category, then the positive attitude to the prevention and investigation of HIV/AIDS since the early adolescents in coastal areas Puger is also high enough. In terms of actions that lead to risky behavior in the transmission of STI and HIV/AIDS are: some students had sexual intercourse, had sexual intercourse using a condom. A few of respondents had sexual intercourse with a girlfriend, a few of students who have ever had sexual intercourse with prostitutes, and there are a few of students had sexual intercourse more than one person, there are a few of students have ever had sexual intercourse with masturbation, and there are some students who experienced symptoms of STI. Although the adolescents knowledge related to HIV/AIDS in the coastal areas is high and the attitudes of HIV/AIDS is in the category adequate, it was not guarantee that they have save behaviour in sexual intercourse. It is because of the reproductive health programmes on adolescent is not optimally. So the role of risky sexual behavior was instrumental in the spread of HIV/AIDS among adolescents in coastal areas in the Puger sub district Jember District.

Comprehensive effort is needed in the form of cooperation between the government through the schools and the community in this case teachers and student's parents in providing health education about the dangers and prevention of HIV / AIDS through the media that attract students such as: film and music performance.

#### References

- [1] Komisi Penanggulangan AIDS Nasional, 2008. *Strategi komunikasi penanggulangan HIV dan AIDS di Indonesia*. Jakarta : KPAN.
- [2] Santrock J.W. 2007. *Remaja*. Edisi Sebelas. Jakarta : Penerbit Erlangga.
- [3] Konda, Kelika A. Klausner, Jeffrey D. Lescano, Andres G. Leon, S. Jones, Franca R. Pajuelo, J. Caceres, Carlos F. Coates, Thomas J. 2005. The epidemiology of herpes simplex virus type 2 infection in low-income urban populations in Coastal Peru. *Journal of The American Sexually Transmitted Disease Association*. September 2005 ; Volume 32 - Issue 9 : pp 534-541.
- [4] Bearinger L.H., Sieving R.E., Ferguson J., Sharma, V. Global perspective on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *The Lancet Journal* . 2007 ; 369 Issue 9568, pp 1120-1231.
- [5] Glasier A., Gulmezoglu A. M., Schmid G. P., Moreno C. G., Van Look P.FA. 2006. Sexual and eproductive health : a matter of life and death. *The Lancet journal*. November 2006 ; 368 issue 9547, 4-10 pp 1595-1607.
- [6] Komisi Penanggulangan AIDS Kabupaten Jember. 2013. *Laporan situasi HIV/AIDS bulan desember 2012*. Jember. KPA Kabupaten Jember.
- [7] Ergene T., Cok F., Tümer A., Unal S. A controlled-study of preventive effects of peer education and single-session lectures on hiv/aids knowledge and attitudes among university students in turkey. *AIDS Education and Prevention Journal*. 2005 : Vol. 17, No. 3, pp. 268-278.
- [8] Notoadmodjo, S. 2007. *Promosi kesehatan dan ilmu perilaku*. Jakarta : Rineka Cipta.
- [9] Green L.W & Kreyter M.W. 2000. *Health promotion planning: an educational and environmental approach*. California : Mayfield Publishing Co.
- [10] Widaystari, D.A, Shaluhiyah, Z., Widjanarko, B. 2010. Adolescents in peril : internet and other factors influencing adolescents' sexual attitudes. *Jurnal Kesehatan Reproduksi*. Desember 2010 ; 1 (1) : pp 1-13.

- [11] Askew I., Berer M. 2003. The contribution of sexual and reproductive health services to the fight against HIV/AIDS : A Review. *Reproductive Health Matters Journal*. November 2003 ; 11 (22) pp 51-73.
- [12] Komisi Penanggulangan AIDS Nasional. 2011. *Upaya penanggulangan HIV dan AIDS di Indonesia 2006-2011*. Jakarta : KPAN.
- [13] Menteri Kesehatan RI. 2012. *Keynote Speech dalam seminar nasional : wujudkan masyarakat sehat bebas HIV/AIDS, langkah strategis mencapai MDGs 2015*. Jember : FKM Universitas Jember.
- [14] Rahyani K.Y. Utarini A. Wilopo, S. A. Hakimi, M. 2012. Perilaku seks pranikah remaja. *Jurnal Kesehatan Masyarakat Nasional*. Nopember 2012 ; 7 (4).
- [15] Syamsulhuda B. Winarti, P. 2010. Faktor yang mempengaruhi perilaku seks pranikah mahasiswa pekalongan tahun 2009-2010. *Jurnal Kesehatan Reproduksi*. Desember 2010 ; 1 (1) ; pp 32-41.
- [16] Widyastuti, E.S.A. 2009. Faktor Personal dan Sosial yang mempengaruhi sikap remaja terhadap hubungan seksual pranikah : Sebuah studi di lokalisasi sunan kuning dan gambilangu Semarang. *Tesis*. Semarang : Fakultas Kesehatan Masyarakat Universitas Diponegoro.
- [17] Hidayangsih, P.S. Tjandrarini, D.H. Mubasyiroh, R. Supanni. 2009. Faktor-faktor yang berhubungan dengan perilaku berisiko remaja di kota Makassar tahun 2009. *Buletin Penelitian Kesehatan* ; 2012 : 39 (2) : pp 88-98.
- [18] Shaluhiyah, Z. 2006. Sexual Lifestile and interpersonal relationship of university students in central java indonesia indonesia and their implication for sexual and reproductive health. [*disertasi*]. Exeter : Pyilosophy in Medical Geography.
- [19] Hidayana et al. 2004. *Sexualitas laki-laki, gender dan kesehatan seksual dalam seksualitas : teori dan realitas*. Jakarta : Pusat Gender dan Seksualitas FISIP Universitas Indonesia.
- [20] Biddlecom A.E., Munthali A., Sigh S., Woog V. 2007. Adolescents' views of and preferences for sexual and reproductive health services in Burkina Faso, Ghana, Malawi and Uganda. *African Journal of Reproductive Health* ; December 2007 : 11 (3) : pp 99-110.
- [21] Hadi N., Suryana I., Nugrahadi W. 2010. Survey pengetahuan dan perilaku terkait HIV-AIDS melalui websurvey bagi pengguna internet di Indonesia. *Laporan Penelitian*. Jakarta : Yayasan AIDSina.
- [22] Irwin C. E., Adams S.H., Park J., Newacheck P.W. 2009. Preventive care for adolescents : few get visits and fewer get services. *Pediatrics Journal*. 2009 ; 123 : e565 DOI: 10.1542/peds.2008-2601.
- [23] Decker M.R., Silverman J.G, Raj A. 2005. Dating violence and sexually transmitted disease/HIV testing and diagnosis among adolescent females. *Pediatrics Journal*. 2005 ; 116; e272 DOI : 10.1542/peds.2005-0194.
- [24] Pakasi D. T. & Kartikawati R. 2013. Antara kebutuhan dan tabu : pendidikan seksualitas dan kesehatan reproduksi bagi remaja di SMA. *Jurnal Makara Seri Kesehatan*. 2013 ; 17 (2) : 79-87.
- [25] Hughes J., McCauley A.P. 1998. Improving the fit : adolescent' need and future programs for sexual and reproductive health in developing countries. *Studies in Family Planning*. 1998 ; 29 (2) : 233-245.