

# Deviant Behaviour in Abusing Antitusive Drug Contains Dextrometorphan among Teenagers (Case Study in Bengkulu City)

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## Abstract

The level of drug abuse and distribution at black market in Indonesia more than one percent of the population. It can be seen from the study results of national narcotic agency (BNN ) that drug users in Indonesia reach 1.99 % of the population age 10-59 years. Based on the BNN study results, there are 11 kind of drugs often abused particularly by junkies such as marijuana, dextro, exctasy, luminal, valium, methadone, amethyst, fungi manure, inhalant, napacin and bodrex. Two out of the seven drugs were sold free and easy to obtain that are napacin and bodrex, and a generic drugs namely dextrometorphan. The general objective of this study is to find deviant behavior in abusing drug contains dextrometorphan among teenagers in Bengkulu city. This research used qualitative method with intrinsic case study design. The Research was carried out in the Bengkulu city, began with the observation at Pantai Panjang and develop into Bendungan Babatan Hulu Seginim according to the development of research process. The data collection was done through the search from various information sources such as observation, in-depth interviews and documentation study. This research used a snow ball method to get information from the drug use informants. Data collection was stopped when there was no new information, replication or repetition information and the data was saturated. The procedure of data analysis was themes analysis after receiving a description of the data collection. Themes analysis was conducted not to generalize but to understand the complexity of cases which studied. The analysis was done after the whole picture included in a depth interviews transcript. The next procedure is interpretative stage, and then made a report of meaning cases based on the results of research or learning in unusual situation. This stage is called as lesson learned. The results showed that teenagers as drug users because of friends invitation and they want to try it by themselves. They consumed 10 to 30 sachets per day mixed with tuak, torpedo or fillip for the purpose of obtaining pleasure, imagination, amusing themselves and releasing unburden mind. The drugs was affordable at stalls and mini market because of low price and without control that should be carried out by the authorized institution. Drug abuse containing dextrometorphan has become social phenomena, the government was required to pay special attention in supervision and controlling.

**Keywords:** deviant behaviour, teenagers, drug abuse, dextrometorphan

## 1. Introduction

The level of drug abuse and distribution at black market in Indonesia has been more than 1% of the population. It can be seen from the research report of National Narcotic Agency (BNN) that drug users in Indonesia reach 1.99 % of the population age of 10-59 years. It is also found 11 kinds of drugs that are commonly misused by junkies such as marijuana, *dextro*, ecstasy, luminal, valium, methadone, amethyst, fungi manure, inhalant, *napacin* and *bodrex*. Two out of seven kinds of drugs namely *napacin* and *bodrex* are sold freely and easily obtained beside a generic drugs namely dextromethorphan (BNN 2011)

Dextrometorphan (DXM) is commonly used as single medicine in cough treatment and sometimes combined with other drugs such *fenilefrin*, *paracetamol* and *clorfeniramin maleat* in influenza treatment. The combination of such drugs can be found in many forms such as syrup, tablet, spray and lozenges. DXM is an active substance in form of white powder effective as antitussive. The retail price recommended by National Food and Drugs Agency (BPOM) is Rp.50,- to Rp.100,- per each tablet and Rp.1000,- to Rp.1500,- per tablets pack. This drug is affordable and sold freely without prescription at stores which led the misused by teenagers.

Deputy of Product Supervision of Therapeutic Narcotics, Psychotropic and Addictive Substances, Dra. A. Retno Tyas Utami, Apt., in Media gathering forum on Dextrometorphan Abuse in BPOM Jakarta on 2013 stated that the consumption of DXM for temporary pleasure/ euphoria will led the users into the state of hallucination, senseless, unproductive and a fatal risk of death compared to normal. On 2013, BPOM released a termination license of drugs containing DXM based on the Decree of the Head of BPOM of the Republic of Indonesia No. HK.04.1.35.06.13.3534 date June 26<sup>th</sup>, 2013 proposed to Gabungan Perusahaan Farmasi Indonesia (Pharmaceutical Corporate Union of Indonesia). It resulted on 2014 that all medicines for cough treatment containing single DXM substance were banned and terminated from the market.

The side effect and overdoses of dextrometorphan are permanent which is very dangerous for the youths. The consumption of 10 tablets at once could cause neuro system depression which resulted into addicted. 100-200 mg dose could give a light stimulus effect, 200-400 mg dose could bring an effect of euphoria and

hallucination, 300-600 mg dose could result on visual perception disorder and motory coordination loss, while 500-1500 mg dose could cause an effect of sedative dissociative (a mental condition felt by a drug user like his soul is separated from his body) which lead to a fatal death (BNN 2011)

A survey done by BNN and University of Indonesia in 15 provinces of Indonesia on 2010 found that DXM abuse was highly found among teenagers in Middle school even in Elementary School age. Moreover, DXM abuse done by teenager of age 10-14 years old reached 184 children, age 7-9 years old was 7 children, and age 15-18 years old was 695 children.

Drug abuse is classified as deviant behavior. Behavior is all elements that constitute the manner and readiness to do an action. An action is the result of behavioristic process. A person with the same behavior cannot be guaranteed to do the same thing. Spiritual and physical environment are very significant to influence the system of a person's social action. The study of the cause of drug abuse cannot be separated from the development of knowledge and morality of the subjects, and it also should consider the condition of social, cultural, economical and political environment bound to the subject (Tuti 2007).

Based on the pre observation stage, pile of trashes of popular cough syrup brand "K" in sachet packs were found in many areas of Pantai Panjang. The used sachet trash can be found under all seats or benches and bushes along the seashore of Pantai Panjang, and even in some places the trashes found was in a box package. The trash was relatively new looking from the condition of the sachet that indicated the current use. Another source claimed that the selling of cough syrup brand "K" was top-rated selling in one of drugstore near an Islamic Boarding School, started in the middle of 2015 many students bought this medicine in large quantity. The same happened in one drugstore in Rawa Makmur where people can freely buy this drug and the sale was relatively rapid. The pharmacists also claimed that it is normally found the purchase in mass quantity. One box of this medicine contains of 30 sachets of 7 ml containing of 100 mg *guaifenesin*, 15 mg dextromethorphan and 2 mg *chlorpheniramine maleat*.

Those findings were strengthened by the confession from an informant that is also a university student claiming the abuse of cough syrup brand "K". He is used to taking 6 up to 10 sachets cough medicine brand "K" at once and are sometimes combined with refreshing water to gain euphoria sensation and illusion in order to entertain himself. It was also found that the informant did this action deliberately in group with other students who live nearby. sold freely with the affordable or reasonable retail price resulted to cough syrup containing dextrometorphan accessible for teenagers.

Negative effect of this drug is very dangerous for the youths particularly to the users' health. Since Indonesian campaign of Drugs Alert, the indication of drug abuse of cough syrop containing dextrometorphan should be monitored carefully in order to prevent the damage of quality life of young generation of this nation. Based on the pre observation in areas of Pantai Panjang and data from informant related to drug abuse of cough syrup brand "K" over the prescribed dose, then it is suggested to conduct the study with the purpose of finding out behavior deviant regarding the abuse of cough syrup containing dextrometorphan among teenagers of Bengkulu city.

## 2. Method

This study used qualitative method with intrinsic case study design. It focused on the unique case issue that only happened in certain area particularly which also meant that the study cannot be generalized to all areas. The characteristic of qualitative approach with intrinsic case study design is to develop depth description and analysis of a case through the study of the phenomenon, program, and activity of more than a single subject (Creswell 2007).

Data collecting was done through observation, interview, and documented study. Researcher used snowball method to gain information from the informant. The sample used in qualitative study was in small number and developed along the research stage. Snowball sampling technique consists of 3 elements namely place, actor and activity. Researcher obtained the data from one informant to another through depth interview. The data collecting stops when there is no more new informant, replication or redundancy of information variance and saturation state of information.

The first observation was done in areas of Pantai Panjang in Saturdays and Sundays. piles of trashes of popular cough syrup brand "K" with orange flavor were found in fresh condition. Then the interview was done to some primary informants and secondary informants. The primary informants were located in Pagar Dewa and in Bengkulu Tengah. There were four interviewers that was on charged one in each location respectively Bengkulu Tengah and Bendungan Desa Babatan, and two interviewers in Bengkulu city. Different from research with quantitative approach, this qualitative study suggested any possibility encountered in the field along the research was carried on.

At the beginning, the study was carried only in areas of Bengkulu City, however it then spread to other areas which caused the expansion of interviewers distribution. Along the in-depth interview, all the conversation and data were gathered and recorded by mobile devices. Furthermore, interviewers initiated to record the

interview process into a video however the informants did not give permission to the request and the lighting at night was not very conducive either. Primary informants were drug abusers of cough syrup sachet containing dextrometorphan. There were 11 primary informants and the characteristics of those are displayed in the following table:

Table 1. Informants' characteristics

No.	Name	Age (years)	Status
1.	Informant 1	20	University Student
2.	Informant 2	23	University Student
3.	Informant 3	15	Active Student
4.	Informant 4	15	Active Student
5.	Informant 5	16	Active Student
6.	Informant 6	14	Active Student
7.	Informant 7	15	Active Student
8.	Informant 8	18	Non-Active Student
9.	Informant 9	16	Active Student
10.	Informant 10	16	Active Student
11.	Informant 11	16	Active Student

Moreover, researcher tried to gain more information from stakeholder related to drugs surveillance and control. Since there was no response from BPOM, researcher initiated to dig information from Provincial Department of Health of Bengkulu particularly from Head Division of Pharmacist which is part of Division of Health Service of Provincial Department of Health. The data collecting also involved literature study of references, national and international journals related the topic of the research and official information from BPOM and Ministry of Health.

Data analysis in case study could be in form of holistic analysis or embedded analysis. However, this research was particularly analyzed by embedded analysis to gain in-depth understanding of the case. The procedures started by compiling all interview transcripts of in-depth interview to informants which were later analyzed based on themes analysis. It was done not to generalize the case but to draw an understanding the complexity of the case. The themes analysis was done after the complete picture of the interview transcript was obtained. The next step was interpretation that required researcher to arrange a report on case points based on research result or abnormal situational study. This stage was also known as lesson learned. The summary of themes analysis can be seen in table 2.

Data analysis in qualitative basically starts since the data collecting stage. In the other words, the data analysis had been done before, along and after the research. The results obtained were later related to theories that are relevant to social theories, research topic and previous studies to draw a holistic description of the cases.

Table 2. Summary of Themes Analysis

THEMES	REAL TRANSCRIPT	ESSENTIAL DESCRIPTION
Drug abuse motivation	Just dabbling because of friends' invitation	Negative Influence comes from friends and curiosity to test something new
Duration and frequency of drugs usage	Every day, three times a week, once a week	The consumption depends on financial of drug user.
Drugs Dose	10 sachets, 15 sachets, 25 sachets, 30 sachets.	Over the prescribed dose based on age direction use.
Drugs Suppliers	Drugstores, stores and mini market	Sold freely, affordable, and available.
Other combining substances	Energy drinks ( <i>Extra joss</i> , <i>Krating Daeng</i> , <i>Torpedo</i> ), <i>tuak</i> ( local beer of fermented sugar), and mineral water	Drugs combined with alcohol drinks or other substances containing caffeine could increase the effectiveness of drug.
The objective of drug abuse	To have imagination of being rich, to feel joy, happy, burdenless, to get hallucination, and to get drunk	Drugs consumed for side effects instead of cough treatment
Side effects of the drug	Dizzy, nausea, feel like floating but great sensation	Side effects of the drug range from light stimulus through hallucination.

### 3. Result

At the beginning, the research only concerned in areas of Bengkulu based on the pre observation in Pantai Panjang and data gathered from primary informants in Pagar Dewa and Hibrida. However, through snow ball method and informants' testimonies, the research was developed to reach some areas in Bendungan Desa

Babatan Hulu Seginim and Bengkulu Tengah. This change was purpose to complete the further information.

The youngest drug abuser of cough syrup containing dextromethorphan was 14 years old and the oldest was 23 years old. In average, the abusers were students. it was also found that the drug use informants that were in university have been drug abusers since high school, while those in high school have abused drugs since in middle school. There was also informant that just abused drug for a month because of friend's influence.

Motivation or reasons of drug abuse cough syrup containing dextromethorphan were friend's influence and dabbling which led into habit and addiction. Those abusers claimed that drugs could help them to forget the problems, as imagination booster, to entertain themselves and to feel burdenless.

The frequency of drug abuse could be various ranging from once a week to daily usage depending on financial ability of drug users. In average, they took 10 to 15 sachets for once consumption, and there were also informants that took 30 sachets at once. Normally, they combine the drug with other substances such as *tuak* (local beer of fermented sugar), torpedo (energy drink) or refreshing water. But there were also informants that just took the drug without combining it with other substances.

Cough syrup with lime flavor was dominantly preferred by drug abuser in Bengkulu city while piles of used sachets with orange flavor were found in Bendungan Babatan Hulu Seginim. The preference of certain flavour was proven with the majority of used sachet or box found in areas of Pantai Panjang, there were even three sacks of used sachets of cough syrop found in Bendungan in September 2016.

Informants bought the medicine at stores, drugstores and minimarket. It was relatively easy to buy the medicine since it was classified as free medicine. Beside, the retail price in affordable or cheap. One of informant stated that,

"... if I want to get drunk with other thing, I don't have money".

Another informant said,

"I usually take 10 to 15 sachets, in a week I at least take 15 sachets or I'll get dizzy. I'm very careful in buying the medicine, I just buy 5 to 10 sachets in each store to avoid suspiciousness. I was once asked by the store keeper and I claimed to use the medicine for research ."

The expected result of drug abuse of cough syrup containing dextrometorphan is the sensation of calmness, floating and "enjoyment", as it was stated by informants as following.

"It feels like drunk...calm and free of any thoughts"

"All I want after taking the meds is feeling enjoyment"

"The sensation is very great, calm, floating"

"...just for drunk..the effect is so strong"

Beside the interview with primary informants, the research also interviewed the Head Division of Pharmacist and Medical Instrument of Provincial Health Department. This was due to BPOM of Bengkulu province did not give any response to the investigation of this research until the research done completely.

Head Division of Pharmaceutical and Medical Instrument had known the issue on drug abuse of cough syrup containing dextrometorphan from mass media but the assumption was only in small scale abuse instead of global abuse spread through regencies in Bengkulu.

It was true that Head Division of Pharmaceutical and Medical Instrument main duties were planning and training pharmaceutical distribution facilities based on the regulation given from Ministry of Health. While the surveillance function was held by BPOM. Furthermore, Ministry of Health has released official letter of instruction on 2004 concerning on the data collecting of total number of drugs Pharmaceutical Storeroom either in Provincial or Municipal level; direction of annihilation medicine containing dextrometorphan based on the applied regulation as the state's assets; dextrometorphan is expelled from national drug formulary and substituted with codeine 10 mg, 15 mg, and 20 mg as it is stated in antitussive drugs lists point 26.2. Besides, single preparation of dextrometorphan was not listed in e-catalog list of procurement of goods and services in 2015.

The source also claimed that surveillance was the duty of BPOM instead of Health Department, thus the coordination between those two agencies was very needed concerning on medicine circulated in the society. However, the fact indicated the lack of it.

Cough syrup brand "K" containing dextrometorphan was classified as free drugs that do not need medical prescription. It was produced by PT. KF legally and the distribution to drugstores with license has followed the right procedures.

"If the medicine is available in stores and minimarkets, then it's out of our control and responsibility, it is very possible that the store owners buy the medicine from drugstores. Even the distributor does not know about this"

Head Division of Pharmaceutical and Medical Instrument also stated the possibility of drug abuse of substituting dextrometorphan to codeine since codeine was classified as narcotic drug.

## 4. Discussion

### 4.1. The abuse of Cough syrup containing Dextrometorphan among Teenagers

In average, the abusers of cough syrup brand “K” containing dextrometorphan were teenagers. They abused this type of drugs was based on friend’ influence that had been prior drug abusers. Thus, social influence where those teenagers interact day to day gave negative influence. This was in line with the theory of differentiation or differential association that believes on deviant behavior is the result of social interaction between an individual and the one with deviant behavior. Curiosity to try something new and friendship solidarity were the trigger to drug abuse. Schwartz (2005) suggested that drug abuse was commonly found in teenage party, before and after school schedule. A study by Akerman (2010) also indicated the increase abuse of dextrometorphan among teenagers based on the data from emergency room in the last decade.

The findings in this research were also in line with the data obtained from the survey held by BNN and University of Indonesia in 2010 concerning on high level of drug abuse of cough syrup containing dextrometorphan among teenagers, mostly done by group of teenagers of 15-18 years old. The abuse is still happening until now without any systematic preventive action done by government. This was proven by the widespread of this drug abuse not only in Bengkulu city but also in regency areas.

Piles of used sachets of cough syrup regularly found in areas of Pantai Panjang and Bendungan Babatan Hulu Seginim on the weekend indicated this problem happens normally. Moreover, stores and minimarket freely sold this medicine without any control or surveillance from authorized institution that should control and monitor the circulation of drugs in society. Deviant behavior could be caused by tension in society structure resulting depression on one individual, strengthen by control lost or social control or neglectedness from family and surrounding people (Tuti 2010, Bimo 2003).

Research by Romanelli (2009) and Smith (2009) suggested education by cleanness to prevent drug abuse due to affordable retail price and accessible while the negative effect was very dangerous for teenagers’ health.

The drug abuse phenomenon happened without any control and surveillance could be proven by piles of used sachets found on the weekend along three times observation in areas of Pantai Panjang. Besides, the same happened in areas of Bendungan Babatan Hulu Seginim even in Lebaran Day (Muslim Holiday). Local teenagers usually used the term “ngomiks” to describe this kind of drug abuse.

Lack of social control, especially from family promoted this deviant behavior and contaminated other teenagers throughout regency. As it was stated by Mohammad that teenagers without guidance and enough space to recreation and pursuing ideas then negative effects of behavior such as drugs abuse, alcohol addiction and free sex could affect their development (Mohammad 2014). Teenagers tended to find some ways to fill their imagination or wills that can not be real through drug abuse. They got what they mostly wanted instantly from drug abuse that could give an effect of hallucination.

The reasons of drug abuse of cough syrup brand “K” were to find pleasure, to forget the reality or problems and to be free of from any thoughts, and to boost their imagination. Youthful period is the phase when teenagers try to find their identity through some typical behaviors such as restlessness, rebellion, group activities and stubbornness to try something new. This was in line with the ideas suggested by Levine (2007), Noonan (2000) and Roringpandey (2013) who believes the easy access to get drugs in high dose could emerge both physiology and psychology effect for teenagers which could led into a fatal effect to teenage drug abusers.

To accomplish their mission, drug users took 10 to 25 sachets of cough syrup brand “K” at once consumption with 15 mg of dextrometorphan in each sachet. The prescribed dose for treatment to patient with age up to 12 years or adult is only 10 mg to 20 mg under 6 hours to 8 hours treatment. While drug abusers took 150 mg to 450 mg and most of them did this abusive action daily unless they are out of stock. The effects ranged from light stimulus, euphoria to hallucination. If the dose is increased and combined with alcohol drinks the toxic effect of dextrometorphan could be fatal.

Dextrometorphan was once classified as strong drug or G (*gevaarlijk*) list drugs, even in some literature, it was categorized in opioid group. However, cough syrup containing dextrometorphan is still sold freely without any control and accessible with affordable retail price for teenagers. The abuse of this drug for addicted substance instead of medical treatment was very risky for teenagers’ health (O’Brien 2006, Welch 2012, Wilson 2011).

### 4.2. Policy Aspect

Based on the Decree of Ministry of Health No. HK02.02/Menkes/137/2016 concerning on national drug formulary; Revision on the Decree of Ministry of Health No. HK.02.02/Menkes/523/2015 related to antitussive drugs list point 26.2 that stated codeine 10 mg, 15 mg, and 20 mg substitute dextrometorphan. Codeine itself is classified as hard drug or narcotic that requires medical prescription. The implication was if it was listed in

national drug formulary and codeine 10 mg is available in Public Health Center (Puskesmas), the drug abuse could still happen since many of Head of Puskesmas are not doctor (medical personnel). The authority of prescription should be on doctor and dentist only while in some cases, not all puskesmas has doctor.

The high usage of cough syrup containing dextrometorphan, not single substance, has been social problem namely overdose drug abuse instead of prescribe medical treatment. The purpose was for temporary happiness and pleasure that risked abusers' health. The indication of this drug abuse combining with *tuak* and refreshing water was could increase the toxic effect that led to fatal effect for teenagers.

The policy stated dextrometorphan as free drug was contradicted to prior policy stated dextrometorphan as a strong or G list drug. Besides, based on the instruction of Head of BPOM on 2013, single substance dextrometorphan has been banned to sell and should be annihilated from the market. This prohibition indicated the problem related to the use of dextrometorphan. If single substance dextrometorphan was problem, then cough medicine containing dextrometorphan should be given a serious attention from regulation makers particularly to control and prevent the potential drug abuse happened among teenagers.

Substituting antitussive agent dextrometorphan with codeine could also emerge the potential drug abuse. If dextrometorphan classified as limited strong drug was substituted by codeine (G list drug or narcotics) in national drug formulary but there were no intensive control and surveillance, then the possibility of drug abuse could still happen.

Surveillance on cough medicine circulated in society did not get special attention from government. It was available not only in licensed drugstores but also at stores and mini market. Though the warning related to this problem had been published from central government to society in local mass media, the abuse of cough syrup brand "K" still happened out of control.

## 5. Conclusion

Based on the research result, it can be concluded that the abusers of cough syrup containing dextrometorphan were students of age 14 to university students of age 23. Drug abusers firstly took cough syrup brand "K" based on friend' influence and motivation to try something new. The total drug consumed ranged from 10 to 30 sachets at once consumption. The total dose of dextrometorphan was 150 mg to 450 mg. Cough syrup containing dextrometorphan has been abused as drug to gain temporary happiness and pleasure, be free of any thoughts or problems in reality and as imagination booster instead of medical treatment. Cough syrup brand "K" was classified as free-limited medicine and sold freely not only in drugstores but also at stores and minimarket with affordable retail price and accessible for teenagers.

## Suggestion

The abuse of cough medicine brand "K" among teenagers is a concerned social phenomenon that requires strategic solutions. It is recommended to strengthen the family role through parents' alert toward children's deviant behavior and intensive care on teenagers. This could be done through understanding dissemination on adolescent growing stages and parenting groups that could help parents to remain one to each other and monitor the problem in the society. Parenting groups can be in form of *Pengajian* (Moslem female/male group), gathering group, and neighborhood role. It also requires coordination between Provincial Health Department and BPOM in surveillance and control drug distribution in society. Strict regulation should be applied to limit the distribution of cough medicine containing dextrometorphan at stores and minimarkets. Government also needs to involve society in surveillance role through an accessible medium for any deviant or drug abuse in their neighborhood. The change in surveillance paradigm of watchdog control should be shifted into pro-active control. This can be done through risk based surveillance that concerns on preventive strategy with *risk management* program from business agents verified by regulator, and through inter-sector strategical communication risk related to drugs procurement and distribution.

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