

1st
WORLD
CONGRESS
ON HEALTHY AGEING
19 – 22 March, 2012



www.healthyageingcongress.org

Organised by:




Malaysian Healthy Ageing Society

Co-Sponsored:



World Health
Organization

A collection of objects is arranged on the left side of the slide. At the top left is a portion of a chessboard with several pieces. Below it is a blue ribbon with a circular emblem. To the right of the ribbon is a silver star-shaped medal with a central emblem. Below the ribbon is another silver star-shaped medal with a central emblem. At the bottom left is a circular compass. In the center, a pair of gold-rimmed glasses is crossed over a thin metal rod with red-tipped ends.

Prevention of Adolescent substance abuse

A/P Dr. Philip George
International Medical
University



Causes for use

- ◆ Surveys suggest initiation thru’ “gateway drugs” – tobacco, alcohol & inhalants
- ◆ Peer pressure
- ◆ Family risk factors

- ◆ Biological - reduced serotonin (Goodwin 1985)
- ◆ Psychiatric illness (conduct dis, ADHD, depression)



Gateway Theory

- ◆ Kandel (1982)
- ◆ Cigarettes & Alcohol first.
- ◆ Developmental stages
 - Beer or Cigarettes
 - Wine or hard liquor
 - Marijuana & solvents
 - Other illicit drugs



Parental influences

- ◆ Parental attitudes towards substances
 - Exposure
 - Non-fulfillment of responsibilities
 - ‘Salience’ (Ahmed et al, 1984) – number of household users of a substance & degree of child’s involvement
- ◆ Parental-child interactions
 - Lack of warm relationship
 - Insecure attachment
 - Harsh, inconsistent discipline
 - Inadequate supervision
 - Marital conflict
 - Physical / sexual abuse

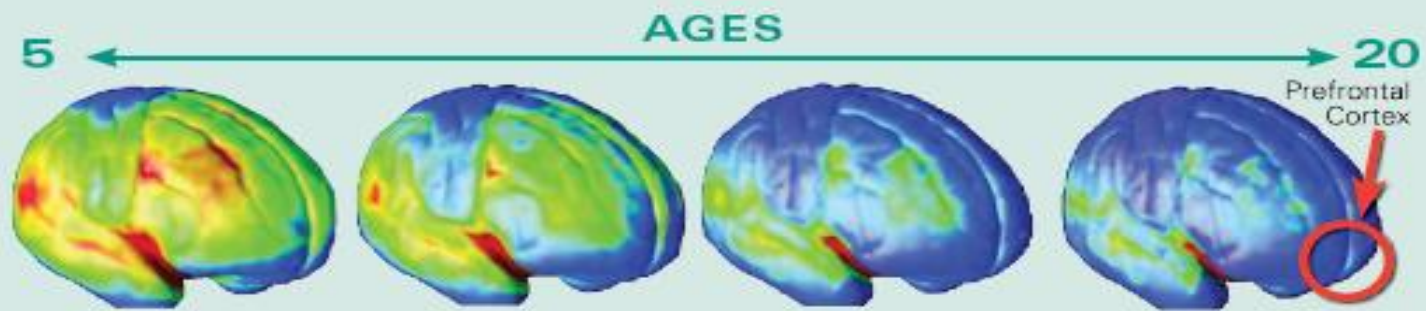


Peer Pressure

- ◆ Effect on the initiation, development and maintenance of substance use
- ◆ Socialization or interpersonal selection
- ◆ Susceptibility due to
 - Involvement in peer-related activities
 - Attachment & reliance to peers rather than parents.
- ◆ Substance abuse positively related to risk taking behaviour, sensation seeking, higher value of independence, delinquency.

FRONTAL LOBE

The fact that this critical part of an adolescent's brain is still a work in progress puts them at increased risk for poor decisions (such as trying drugs or continuing abuse). Thus, introducing drugs while the brain is still developing may have profound and long-lasting consequences.



Blue represents maturing of brain areas.

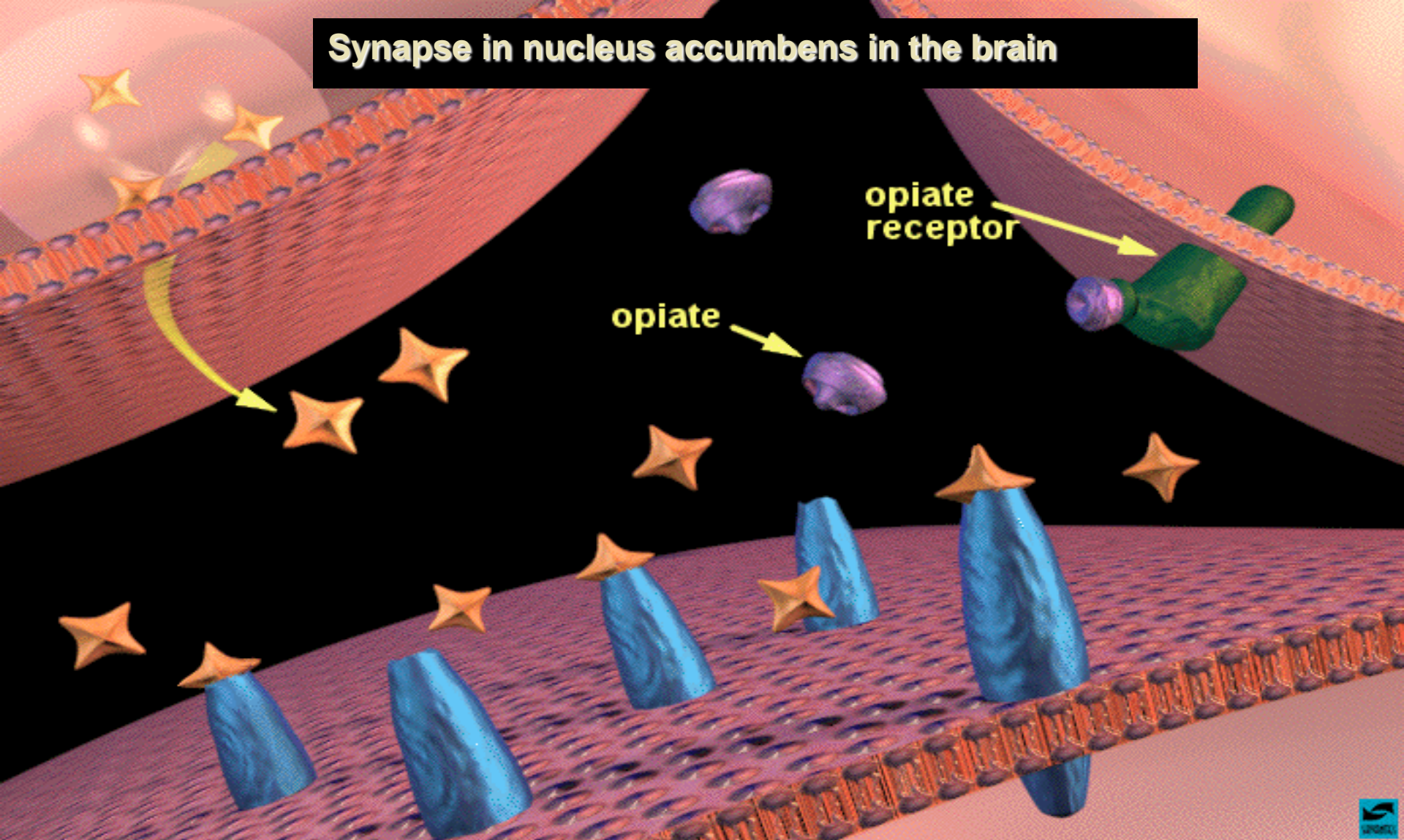




Genetic & biological causes

- ◆ Dopamine release from the medial part of the nucleus accumbens is critical for the reinforcing effects of opioids.
- ◆ It is suggested that all positive reinforcement associated with food, reward and sex depends too on this circuit.
- ◆ Dopamine release in the mesolimbic system facilitate learning towards important events leading to wanting and craving in the dependent.

Synapse in nucleus accumbens in the brain



Three types of neurons participate in opiate action: one that releases dopamine(L), neighboring terminal(R) containing GABA and post synaptic cell containing dopamine receptors(below)



Temperament

- ◆ Temperament deviations a/w increased psychopathology and substance abuse
 - ◆ Risk for substance abuse
 - Increased behavioural activity level
 - Increased impulsivity
 - Reduced attention span
- (Reich et al, 1993)
- ◆ Concomittant psychiatric morbidity
 - Depression
 - Anxiety disorder

Prevalence of substance use among secondary school students in a rural area of Malaysia

Department of Psychiatry,
Clinical School,
International Medical University
Seremban

Dr. Philip George

Ms. Lim Kah Yen,

Mr. Ding Ming Tat,

Mr. Siva Saravana Kumar

Objectives

The objectives of this study were:

1. to determine the type of substance used by rural school children,
2. to determine the differences in substance use among genders and age groups,
3. to identify possible reasons for abuse.

Methodology

- ◆ Three secondary co-ed schools in a rural area of Negri Sembilan in Malaysia were chosen. (Choice determined by accessibility)
- ◆ Permission was obtained from the school authorities, local Education Department & from the Ministry of Education Malaysia
- ◆ A total of 1091 pupils were selected from secondary school, of both gender, and ages between 14 to 17 years old. All students were included except those absent on the day of survey.
- ◆ Respondents were required to answer a 5-page questionnaire and all information is kept confidential. They are also told to be as truthful as possible.

Sample Characteristics

No. of respondents = 1091, but sample size = 1070

21 forms were rejected because of invalid data entry

Race

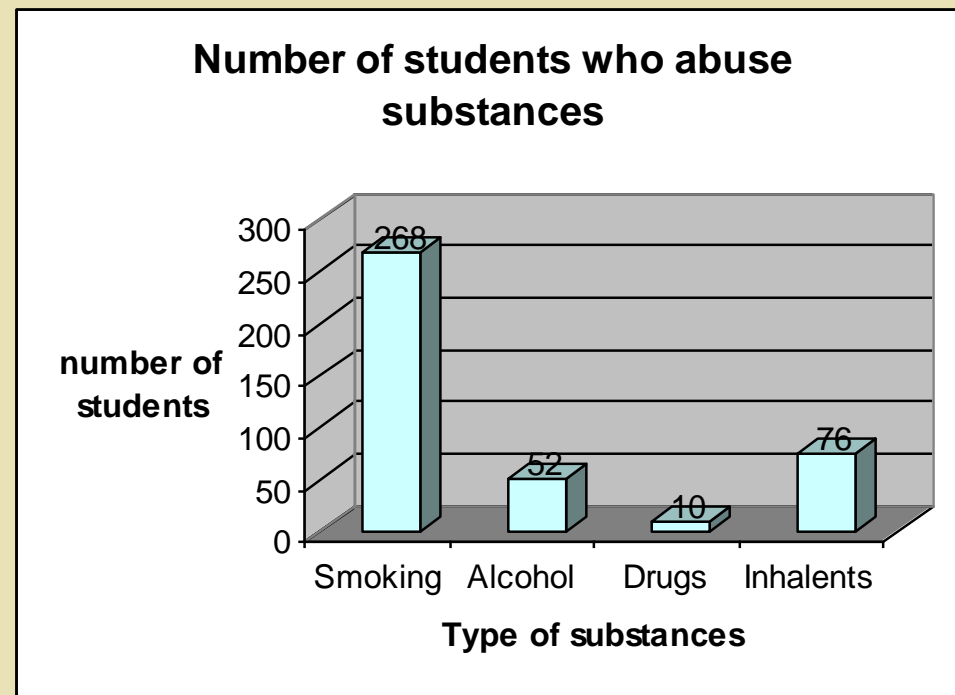
- ◆ Malay = 925 (89.6%)
- ◆ Chinese = 56 (2.9%)
- ◆ Indian = 87 (7.3%)
- ◆ Others = 2 (0.2%)

Gender

- ◆ Male = 654 (64.2%)
- ◆ Female = 416 (35.8%)

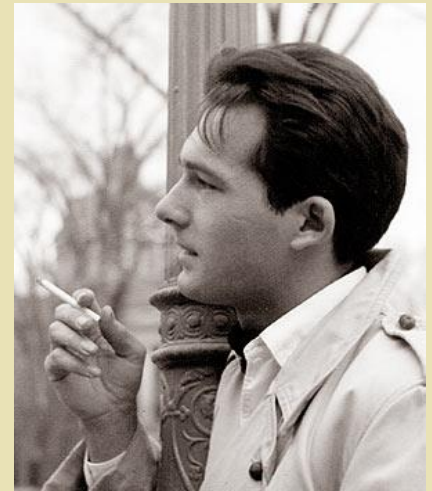
RESULTS

- ◆ **37.9%** (406 students) use licit and illicit substances
- ◆ **Tobacco** = most widely used, with 25% (268 students)
- ◆ Inhalants = 7.1% (76 students)
- ◆ Alcohol = 4.9% (52 students)
- ◆ Illicit drugs = 0.9% (10 students)



RESULTS : Tobacco Use

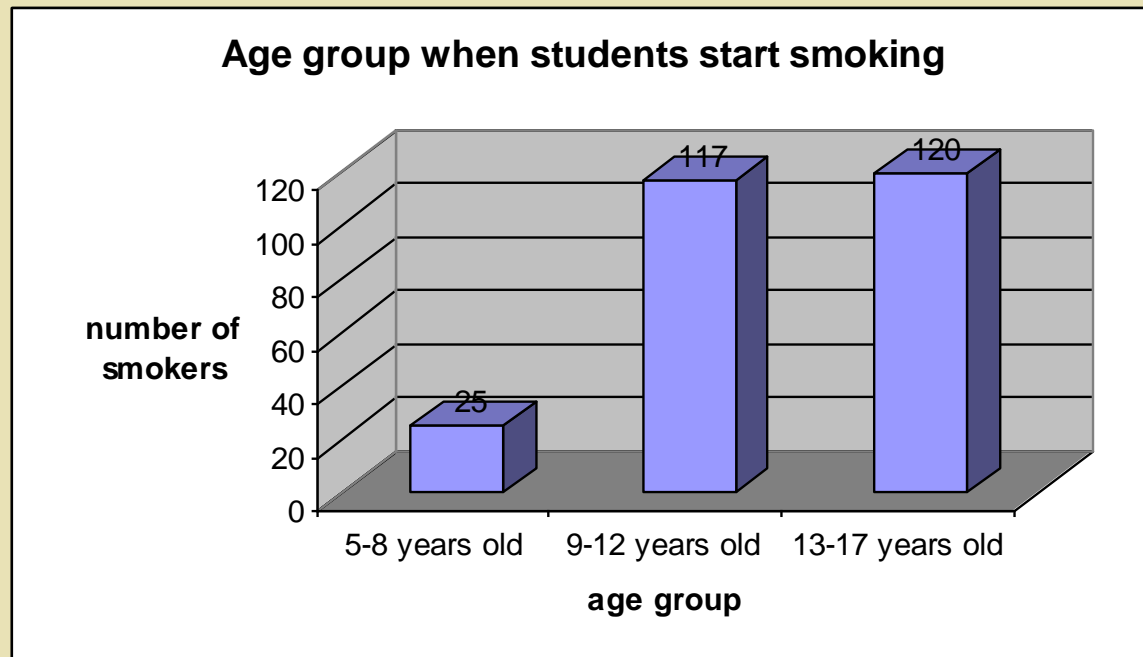
- ◆ 25 % (268 students)
- ◆ 64% of the smokers = male
36% = female



RESULTS : Tobacco Use

When did they start smoking?

- ◆ 45.8% (120) of the smokers started between **13-17 years** of age
- ◆ 44.7% (117) started between **9-12 years old**.
- ◆ **20** students smoked first between 5 to 8 years of age.



RESULTS : Tobacco Use

How many sticks a day?

- ◆ < 5 sticks/day = 81.7% (188)
- ◆ 6-10 sticks/day = 10.9% (25)
- ◆ > 10 sticks/day = 4.3% (17)



RESULTS : Tobacco Use

Reasons for starting smoking?

- ◆ 68.4% (162) : Peer pressure
- ◆ 44.5% (105) : **To release tension / relieve stress**
- ◆ 21.9% (52) : To overcome depression
- ◆ 9.2% (23) : To try (curious)
- ◆ Other answers : feel sleepy, to become thinner, to show off, for fun, for style, control anger, obtain peace of mind



RESULTS : Inhalants

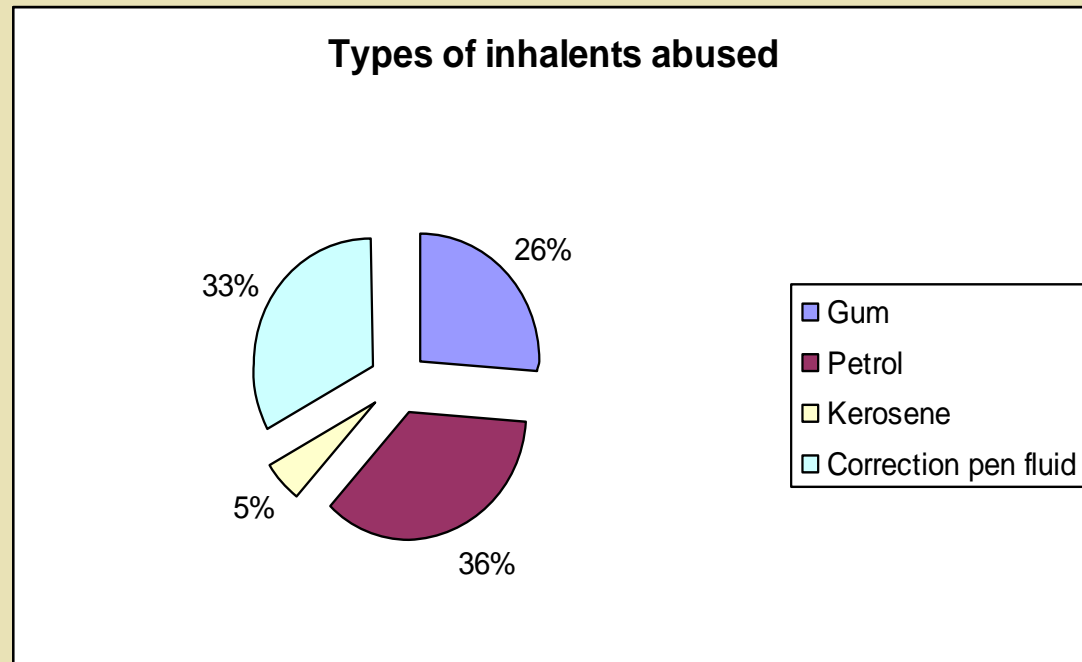
- ◆ 7.1 % (76 students)
- ◆ **Females** (51.2%) inhaled substances more than
- ◆ **males** (48.8%)



RESULTS : Inhalants

What are the types of inhalants used?

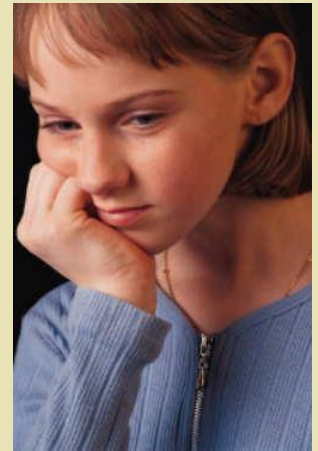
- ◆ Petrol = 36% (52)
- ◆ Correction pen fluid = 33% (49)
- ◆ Gum = 26% (39)
- ◆ Kerosene = 5% (8)
- ◆ Other answers =
perfume, cow dung,
tar, marker pen.



RESULTS : Inhalants

Reasons to start inhaling inhalants?

- ◆ **To release tension / relieve stress = 24.6% (16)**
- ◆ Peer pressure = 24.6% (16)
- ◆ To overcome depression = 20% (13)
- ◆ Other answers : tempting smell, curiosity, better sports performance, for fun, accidentally



RESULTS : Alcohol

- ◆ 4.9% (52 students)
- ◆ More among the Chinese students.
- ◆ Among the Indian students, males drink more alcohol compared to their female counterparts.
- ◆ However among Chinese students 57.9% of females use alcohol compared to 42.1% males

RESULTS : Alcohol

Reasons to start drinking alcohol?

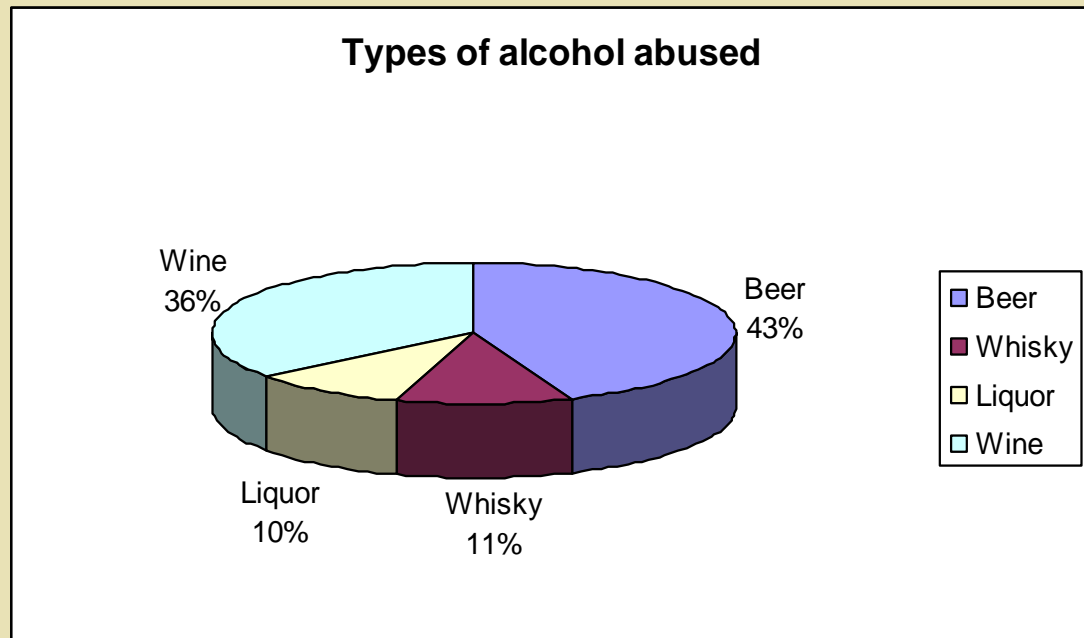
- ◆ 70.8% (34) : Cultural (eg festivals, functions)
- ◆ 31.3% (15) : **To release tension / relieve stress**
- ◆ 22.9% (11) : Peer pressure
- ◆ 12.5% (6) : To overcome depression



RESULTS : Alcohol

Types of Alcohol used

- ◆ Beer = 43%
- ◆ Wine = 36%
- ◆ Whisky = 11%
- ◆ Cheap liquor = 10%



ILLICIT DRUGS



RESULTS : Illicit drugs

- ◆ 0.9% (10 students)
- ◆ 8 males, 2 females
- ◆ Substance used = amphetamine-type substance (3),
Ganja (2) , Heroin (1), cough mixture (containing codeine)(1)
- ◆ Reasons = curious (6), peer pressure (4),
to relieve stress/pressure (4)

DISCUSSION



DISCUSSION : Tobacco

Our results :

- ◆ 25% smoked
- ◆ 36% female
- ◆ 44.5% started smoking due to stress or to relieve pressure

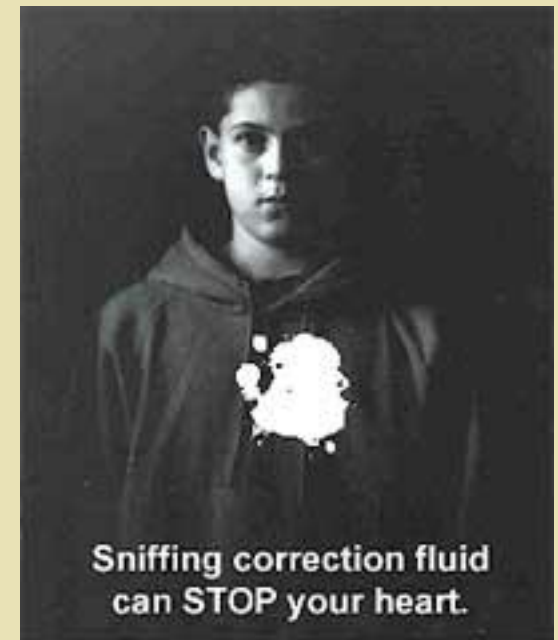


Other studies (Tobacco CPG M'sia 2003) :

- ◆ Some 49% of all adult males and 5% of all adult females are now current smokers.
- ◆ Trend towards a rise in smoking among females.

DISCUSSION : Inhalants

- In most studies, boys were only a little more likely to have tried volatile substances than girls, although in some the proportions were reversed, with girls experimenting more than boys (Kin and Navaratanam).
- ◆ The 1990 National Household Survey on Drug Use in the USA found that 7-8% of 12 to 17-year-olds said they had used volatile substances (*Beauvais F et al*)
- ◆ Surprisingly more females used inhalants than males.



Glue Sniffing, Sarawak Fighting A Losing Battle

BERNAMA : May 02, 2005 13:12 PM



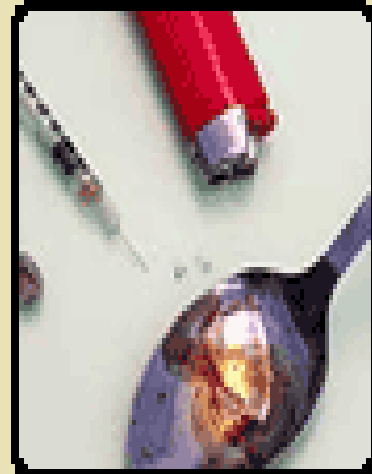
- ◆ Glue was the cheapest & one of the favorite addictive substance in Sarawak, (3 tins of glue for RM10 and easily available).
- ◆ Factors included broken homes, poor parenting, unemployment and peer pressure.
- ◆ Glue sniffers were getting younger with some as young as 10, compared with between 15 and 30 years old previously, adding that an average of four or five glue sniffers were sent to the agency monthly for help.
- ◆ In our survey, 13.4% (11) students first inhaled volatile substances in the ages of 5 to 8 years old.

DISCUSSION : Alcohol

- ◆ In this study, 25% smoked and 4.9% used alcohol.
- ◆ In an unpublished study (Philip et al) in two urban schools with 269 respondents, alcohol use was among 58.6% and smoking among 17.8%.

DISCUSSION : Illicit drugs

- ◆ Close to 1% used illicit substances.
Amphetamine type substances was the most common type.
- ◆ One fault of this study was it didn't look at use of licit substances before (Gateway theory).



Prevention of Adolescent Substance Abuse



Effective interventions

- ◆ ‘Just say no’ - simplistic and naïve
- ◆ What is effective is
 - Providing accurate & unbiased information
 - Build skills (decision making & communication)
 - Counseling
 - Improve access to health services (can your daughter / son seek advise or treatment from the doctor on their own?)
 - Safe & supportive environment with acceptable alternatives.

Mindset change

- ◆ Success is change in behaviour
- ◆ Means need to change from ‘zero tolerance’ to ‘harm reduction’
- ◆ Exclusion policies don’t work.
 - When you expel, suspend student from school, makes the young person even more vulnerable, more chance of higher substance use. They need to stay on in school and be kept engaged and rewarded

Effective education

- ◆ Use what has been shown to be effective
- ◆ Comprehensive approach
 - School, community, parents, doctors
- ◆ Timing of intervention
 - Before experimentation and continue as children grow
- ◆ Realistic goals
 - Harm reduction rather than abstinence alone
- ◆ Class teacher to provide



- ◆ Drug education must be interactive.
- ◆ Young people can exchange views and experiences
 - Why can't cannabis be legal?
- ◆ Humane intervention rather than exclusion!
Deterrent punishment yields no result.
- ◆ Restorative justice vs punishment
 - Victims confront wrongdoers



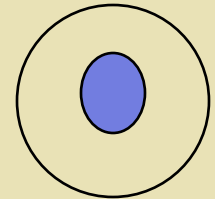
Prevention

- ◆ Primary goal is to defer or prevent initiation of gateway drugs (cigarettes & alcohol)
- ◆ Traditional program
 - Increase knowledge of consequences of drug use
 - found to be ineffective (Bangert-Downs, 1988)
 - Increased interest in drugs (Schinke et al, 1991)
- ◆ Curriculum covering life skills and skills for resisting social influences to use drugs – significant reduction in drug use 6 years later (Botwin et al, 1995)



Family intervention

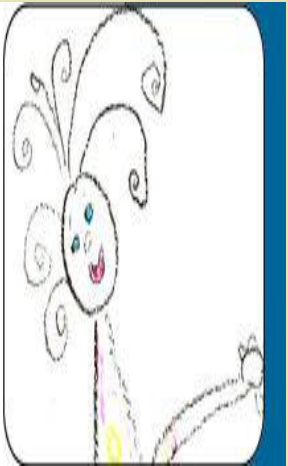
- ◆ Major source of connectedness and support
- ◆ Not all family relationships are positive
 - Family substance abuse
 - Poor or inconsistent parenting
 - Family conflict
 - Lack of bonding
 - Physical or sexual abuse
- ◆ Identify other people – ‘social atom’



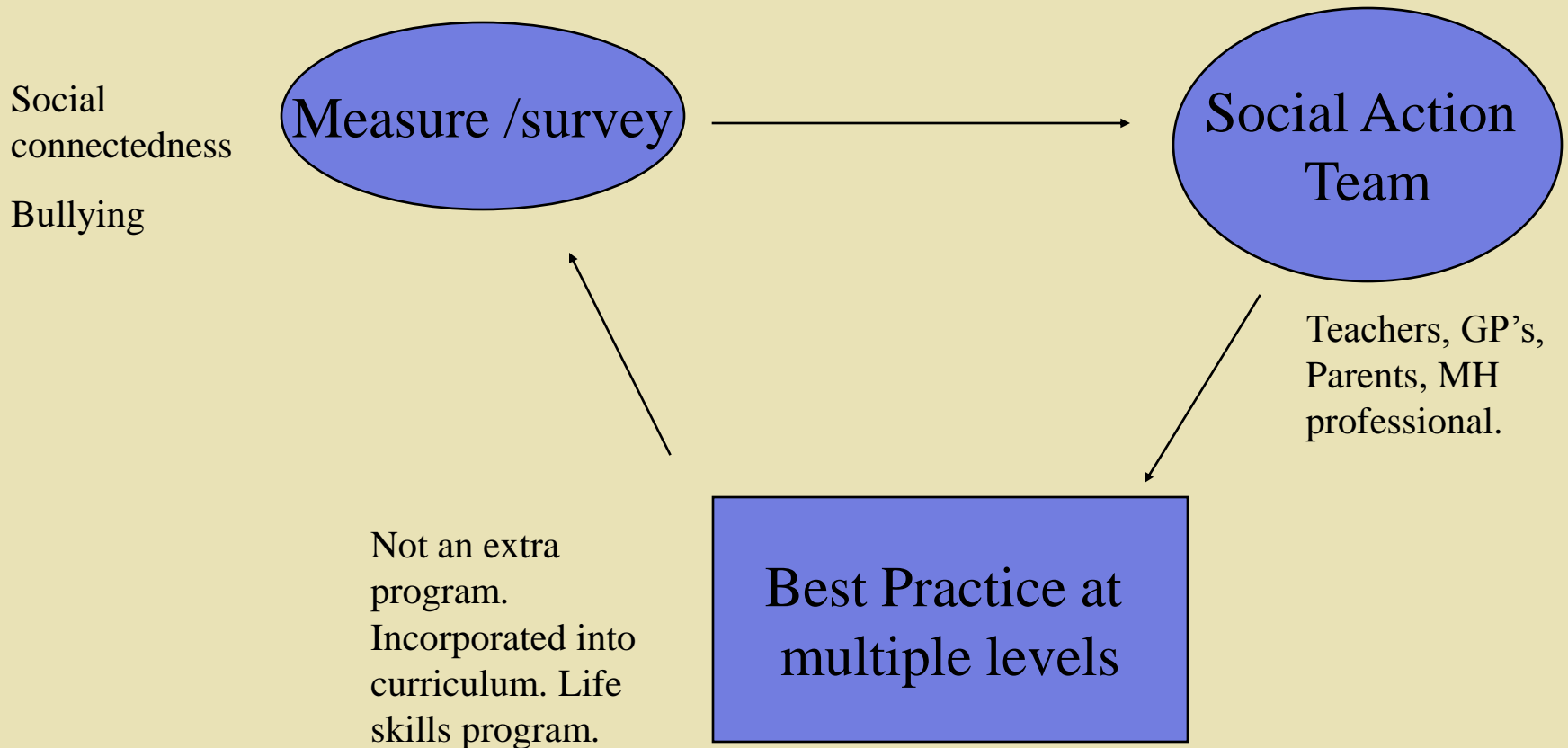
Parenting skills

- ◆ Parenting skills – to empower parents to provide the support needed by adolescents and help prevent reliance on peers or substances.
- ◆ To deal with conflicts that can occur when the views of parents and the teenager differ.
- ◆ Triple P Parenting – Positive Parenting Program (University of Queensland, Australia)

www.triplep.net



Gatehouse Project (George Paton)



- ◆ Social connectedness as a protective factor
 - Family
 - Attachment - Family attitudes
 - Family conflicts - Parenting skills
 - School / community
 - Engagement with teachers (teachers know you and encourage you)
 - Friends
 - Sensation seeking
 - Identity and being belonged.

Prohibitive Prevention

- ◆ Drink driving
- ◆ Control on availability
 - Age
 - Taxes & cost
- ◆ Laws regarding possession and use
- ◆ Advertisement controls
- ◆ Sponsorships



Developing personal coping skills

- ◆ Relaxation training
- ◆ Avoid cues – explore alternatives
 - People
 - Place
 - Time
- ◆ Cognitive therapy
 - Become aware of negative thought
 - Interrupt that train of thought
 - Challenge the – thought & replace with + thought.



Other personal skills

◆ Problem-solving skills

- Recognise when a problem exists
- Generate a variety of potential solutions
- Select the most appropriate option and generate a plan for enacting it
- Evaluate the effectiveness of the approach

◆ Communications skills

◆ Assertiveness skills