KNOWLEDGE AND SKILLS OF YOUNG ADOLESCENTS TO REFUSE SUBSTANCES

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Introduction

• The substance users were young adolescent (5.35%)
• Although the percentage of substance user in young adolescent is relatively small when compared with smokers (69.15%) and alcohol users (13.48%), but the danger for young adolescent is more serious than the other two behaviors.
• The Indonesian National Narcotics Agency (BNN) data show an increase for substance users.
  • 2008 : 2.6 million people
  • 2013 : 4.7 million people
  • 2015 : 5.1 million people
• One dealer in jail, 10 prospective dealers wait
Substance effects deteriorate one's health physically, mentally and emotionally.

Indonesian Ministry of Health Degree Act number. 1529/MoH/SK/X/2010 stated: 31 behavior that should be practiced in rural communities and active alert district known as Clean and Healthy Lifestyle Behavior (PHBS).

The number 26: "no smoking, drinking liquor (alcohol), inhaling opium and misusing substance and other hazardous substances."

The Indonesian National Narcotics Agency efforts at provincial level have been forming anti-substance volunteer cadres at various local universities.

The Indonesian National Narcotics Agency at municipal/district level, has also conducted activities such as counseling to students and teachers in junior and senior high schools. However, how the students' knowledge and skills to refuse substances have been unknown until now.
Objective

To describe the knowledge of adolescents about substances, to describe the teenager's action to refuse substances, to determine the relationship between young adolescent knowledge about substances and action refuse it, and find out the relationship between knowledge, skills to refuse substances and the teenager's characteristics.
Method

- Place: Y city and S district, Yogyakarta province
- Time: June-August 2015
- Population: 2530 students of grade 7 derived from 71 schools in two areas. (selected randomly using proportional random sampling)
- The size: sample size for estimating proportion formula
- Samples: 300 students were selected. The subject was aged 12-15 years old, in grade 7 to 12 Junior High School
  - 148 students from 6 Junior high schools in Y city
  - 152 students from 6 junior high schools in S district
• The reason for criterion:
  • At this age, young adolescent have just left the closed condition to the parental norm and entering higher education
  • Government owned school was chosen because they had the basic similar role in school management, following the standard regulation for Basic and Middle Education, Ministry of Education

• Knowledge of substances was assessed by the ability of young adolescent to answer six items of questions:
  • about the notion of substances
  • the type
  • and content
  • its effects on health

(The test validity expressed by 0.719, Cronbach's Alpha value)
Skills to refuse the substance offer was the ability of respondents to choose the correct action on 7 cases items of various forms of substance offer, packaged in a test

(The test validity expressed by 0.702 Cronbach's Alpha value)

Data obtained was analyzed using Pearson correlation and Spearman rho, with 0.05 significant levels
Results

• Subjects came from two (2) locations:
  • Y city (49.33%)
  • S district (50.66%)

• Gender:
  • male (44.6%)
  • female (52.7%)

• Aged 13-15 years old:
  • the majority was 13 years old (71.7%)
  • the average of 13.02 years old
Table 1. Respondents Characteristics by Gender, Age, and Origin

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Y City Frequency</th>
<th>Y City %</th>
<th>S District Frequency</th>
<th>S District %</th>
<th>Total Frequency</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>66</td>
<td>44.6</td>
<td>76</td>
<td>50.0</td>
<td>142</td>
<td>47.3</td>
</tr>
<tr>
<td>Female</td>
<td>82</td>
<td>55.4</td>
<td>76</td>
<td>50.0</td>
<td>158</td>
<td>52.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 years old</td>
<td>24</td>
<td>16.2</td>
<td>17</td>
<td>8.2</td>
<td>41</td>
<td>13.7</td>
</tr>
<tr>
<td>13 years old</td>
<td>104</td>
<td>70.3</td>
<td>111</td>
<td>73.0</td>
<td>215</td>
<td>71.7</td>
</tr>
<tr>
<td>14 years old</td>
<td>19</td>
<td>12.8</td>
<td>22</td>
<td>14.5</td>
<td>41</td>
<td>13.7</td>
</tr>
<tr>
<td>15 years old</td>
<td>1</td>
<td>7.0</td>
<td>2</td>
<td>1.3</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Average</td>
<td>12.98</td>
<td></td>
<td>13.06</td>
<td></td>
<td>13.02</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>0.565</td>
<td></td>
<td>0.555</td>
<td></td>
<td>0.560</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
<td>49.33</td>
<td>152</td>
<td>50.66</td>
<td>300</td>
<td>100</td>
</tr>
</tbody>
</table>

SD= Standard Deviation
• The average respondents' knowledge about substances was higher than the average score of skills to refuse substances
• The average score of the respondents' knowledge about substances at 66.39 (the maximum score of 100)
• The average score for skills to refuse substances was 55.62 (the maximum score of 100)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Knowledge Average</th>
<th>Knowledge SD</th>
<th>Skills to Refuse Substances Average</th>
<th>Skills to Refuse Substances SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (n=142)</td>
<td>65.14</td>
<td>17.96</td>
<td>55.84</td>
<td>16.57</td>
</tr>
<tr>
<td>Female (n=158)</td>
<td>67.51</td>
<td>12.01</td>
<td>55.42</td>
<td>16.47</td>
</tr>
<tr>
<td><strong>Age:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 years old (n=41)</td>
<td>63.82</td>
<td>17.44</td>
<td>56.10</td>
<td>17.53</td>
</tr>
<tr>
<td>13 years old (n=215)</td>
<td>66.90</td>
<td>17.46</td>
<td>55.29</td>
<td>17.53</td>
</tr>
<tr>
<td>14 years old (n=41)</td>
<td>66.67</td>
<td>17.48</td>
<td>56.41</td>
<td>12.35</td>
</tr>
<tr>
<td>15 years old (n=3)</td>
<td>61.11</td>
<td>25.45</td>
<td>61.90</td>
<td>21.82</td>
</tr>
<tr>
<td><strong>Origin:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y City</td>
<td>69.03</td>
<td>16.03</td>
<td>59.36</td>
<td>12.43</td>
</tr>
<tr>
<td>S District</td>
<td>63.82</td>
<td>18.47</td>
<td>51.97</td>
<td>19.00</td>
</tr>
<tr>
<td>Total (n=300)</td>
<td>66.39</td>
<td>17.48</td>
<td>55.62</td>
<td>16.49</td>
</tr>
</tbody>
</table>
Pearson Correlation analyzed there was a significant relationship ($p=0.01$), showed in Table 3 and Table 4.

### Table 3. Relationship between Respondents’ Knowledge, Skills to Refuse Substances and Origin

<table>
<thead>
<tr>
<th>Origin</th>
<th>Substance Knowledge Score</th>
<th>Correlation Coefficient*</th>
<th>Sig (2-tailed)</th>
<th>Skills to Refuse Substances Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y city (n=148)</td>
<td></td>
<td>0.209</td>
<td>0.011‡</td>
<td></td>
</tr>
<tr>
<td>S District (n=152)</td>
<td></td>
<td>0.182</td>
<td>0.025‡</td>
<td></td>
</tr>
<tr>
<td>Y city and S District (n=300)</td>
<td></td>
<td>0.217</td>
<td>0.001‡</td>
<td></td>
</tr>
</tbody>
</table>

* Spearman Correlation Test (Nonparametric Test), † Pearson Correlation Test (Parametric Test)  
‡ significant at the 0.01 level (2-tailed)
<table>
<thead>
<tr>
<th>Variables</th>
<th>Statistic Analyzes*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef Correlation</td>
<td>Sig (2 tailed)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Substances Knowledge</td>
<td>0.068</td>
<td>0.243</td>
</tr>
<tr>
<td></td>
<td>Skills to Refuse</td>
<td>-0.001</td>
<td>0.991</td>
</tr>
<tr>
<td>Age</td>
<td>Substances Knowledge</td>
<td>0.042</td>
<td>0.469</td>
</tr>
<tr>
<td></td>
<td>Skills to Refuse</td>
<td>0.028</td>
<td>0.624</td>
</tr>
<tr>
<td>Knowledge- Skills to Refuse</td>
<td>Substances</td>
<td>0.213</td>
<td>0.001†</td>
</tr>
</tbody>
</table>

* Nonparametric Correlations Test, †significant at the 0.01 level (2-tailed)
Discussion

- Based on age:
  - 15 years old age group had the lowest average score of knowledge, but they had the highest score of skills to refuse substances among other age groups
  - Analyzed by Spearman's: no relationship between the age difference with the knowledge and skills to refuse substances with p-value = 0.469 and 0.624, respectively
Based on gender

- The average score of substance knowledge was relatively higher in female respondents
- Both male and female groups have the same score in the skills to refuse substances
- Analyzed by Spearman rho: no relationship between the gender differences with the knowledge and skills refuse substances score with p-value = 0.243 and 0.991, respectively
• Based on origin:
  • The average score of both knowledge and skills to refuse substances is higher in Y city than S district
  • Analyzed by Spearman's rho: there was a meaningful relationship between knowledge and skills to refuse substances either in Y city or in S district with p value = 0.011 and 0.025, respectively
  • Analyzed by Pearson Correlation: there was a relationship between knowledge and skills to refuse substances
Knowledge of substances: relatively low with an average score of 66.39.

This score was still higher than the young adolescent's knowledge about smoking score in Jayapura, Papua: 60.81.

Although the substance of the two studies was different, but both included toxic materials, causing addictive, and widely known among young adolescent. Even reference stated that smoking was the gateway to the use of alcohol and substances.

Although the subject criteria of the two studies were the same, but they were conducted in different location.

- The substance research was conducted in Yogyakarta Special Province (Y City and S District), known as the city of students in Indonesia.
- The smoking study was conducted in Jayapura, Papua Province, known as the people with drinking alcohol habit.
- Thus, the user behaviors of these harmful substances (smoking, alcohol, substances) tend to be influenced by the culture or customs of local communities.
Based on respondents’ origin,

- the average score of both knowledge and skills to refuse substances was higher in Y city than S district.
- The differences are probably due to differences in the city (urban) and district (suburban), where the difference also influences their knowledge and skills to refuse substances.

Statistical analysis showed that there was a significant relationship between substances knowledge and skill to refuse substances. This condition could be explained by LW Green which stated that behavior was influenced by predisposing factors (such as knowledge), in addition to two other factors, namely enabling factor (factor predisposing) and reinforcing factor (factor support).
• Related to gender:
  • Female respondents on substances knowledge were better than male, but the skills to refuse the substances offer were just as good on both gender.
  • In general, gender relates to substances as substance-use component (cigarettes, alcohol, and substances), there is various research with various results.
• In the term of age:
  • There was no relationship between the two variables, substance knowledge, and skills to refuse substances offer, with age
  • There was a tendency that the skills to refuse substances score increasing whiles the person getting older
  • This study followed Bar’s recommencement that substances prevention should be carried out at early age, since age was one of the significant internal determinant factor
Conclusion

- Young adolescent’s knowledge about substances and skills to refuse the substances offer still needed to be improved.
- There was a significant relationship between substance knowledge and skills to refuse the offer.
- Young adolescent’s knowledge about substances is slightly higher among female compared to male, but skills to refuse the offer had almost the same result in both genders.
- Skills to refuse substances tend to increase in accordance with age, but there is no significant relationship between knowledge and skills to refuse substances offer in different gender and age.
- Young adolescent’s substance knowledge and skills to refuse the substance offer in Y city are higher than S district, and there was a significant relationship between substance knowledge and skills to refuse the substance offer to the location (urban and suburban).
Suggestion

• The result of this research can be used as an input to Health Promotion program at Indonesian Ministry of Health, particularly young adolescent aged 12-15 years, or equivalent to junior high school students, to improve their prevention behavior against substance use, so that their score in substances knowledge and skills to refuse the substance offer increased
Acknowledgment

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- Ethics having been approved by Ethics Committee Faculty of Medicine, Muhammadiyah University, Yogyakarta
Thank You

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