# Analysis of sexual harassment instruments by Rasch Modeling to identify sexual harassers

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## Abstract

Sexual harassment is an issue that has attracted much attention in both children and adults. However, the victims often prefer to be silent on the matter for several reasons, even though it may have long term effects on them. Thevictims of sexual harassment need to be educated to increase awareness of the associated risks. To realize this goal, the perpetrators of this vile needs to be identified first, though this requires valid and reliable instruments. Thereis a sexual harassment instrument that facilitates the identification of the perpetrators. This instrument includes eight indicators with 32 items. Thehe results of testing the validity and reliability of the instrument with RASCH modeling shows that it meets the requirements and therefore it can be used to identify perpetrators of sexual harassment in Vocational High school.

**Keywords:** Sexual harassment instrument, sexual harassment, rasch analysis

## Introduction

In Indonesia, the subject of sex is consideredtaboo andcannot discuss (Creagh, 2004). There is a need for schools to provide Sex Education to adolescents (Creagh, 2004). Perceiving sex as a taboo encourages abuse and harassment since individuals learn by themselves.This is in line withElsera (2017), which showed thatsexual matters are self-taught through communication with peers or social media. Based on research on inmates of sexual harassment cases in Tanjungpinang Regional Police in 2016, three people stated that a lack of maximum family support facilitated sexual harassment. In other words, the family cannot offer sexual education, which in Malay culture in Tanjungpinang was still considered taboo.

Prapto's findings showed that abuse in the teenage environment stemmed from the lack of information from family, school, and the community about sexual life. The study showed that 21%, 15%, 28%, and 40% of teenagers receiveinformation about sex from home, school, media such as the internet, magazines and films, and peers, respectively (Yelza, 2016). If the family does not provide sex education to children,counselorsare given that responsibility (Saputra & Sofiana, 2016). Information services aim at equipping individuals with various kinds of knowledge needed to solve problems faced regarding the surrounding environment, education, occupation, and social-culture (Azhar & Daharnis, 2013; Luddin, 2010).

The information service is useful for students since theyneed relevant detailsas input for thinking more and adjusting to the environment (Dewi, D. M., 2015). Sex education should be the role of BK teachers, especially in services and related to social and self-development (Creagh, 2004). According to

Yugo Dewi Safaat, implementing social information services do not have a significant influence on sexual harassment behavior (Safaat, Yugo Dewi, 2013).

Guntoro Utamadi & Paramitha Utamadhi (in Satria, E. D., & Elsera, M, 2017) statedthat harassment is a sexual act not invited and unwanted by the victim, whichcreates a feeling of dislike. It can be in the form of whistling for women on the streets, telling dirty jokes to someone degrading to a level of indecency and acts of rape. The behavior identified as sexual harassment includesunacceptable seduction, requests for sexual gifts, and other verbal or physical behaviors (Berdahl & Raver, 2011; Fitzgerald, Drasgow, & Magley, 1999; Fitzgerald, Magley, Drasgow, & Waldo, 1999; Jespersen, Lalumière, & Seto, 2009). This means that sexual harassment can be interpreted as all forms of sexual and indecent connotations of behavior carried out and by the target person. In general, it causes an adverse reaction,shame, anger, and offense to the victim.

Studies show that the main perpetrators of sexual harassment are males (Plummer & Cossins, 2016). According to McDaniels-Wilson & Belknap, the most common perpetrators of sexual harassment are foreign men, male lovers or boyfriends, husbands, uncles,brothers, and stepfathers(Gannon & Alleyne, 2013; Garcia-Moreno, 1999; Gettman & Gelfand, 2007; Gilmore et al., 2014; McDaniels-Wilson & Belknap, 2008). Additionally, one studyshowed that perpetrators of sexual harassment are adults and peers (Finkelhor, Shattuck, Turner, & Hamby, 2014).However, the literature on sexual violations has only focused on malesand neglected female offenders (Finkelhor & Browne, 1985; Finkelhor, Shattuck, Turner, & Hamby, 2014; Gannon & Alleyne, 2013).

Identifying perpetrators of widespread sexual harassment require much effort since no one would want to be identified as a perpetrator. In Indonesia, the identification of the perpetrators is based on the information from the victims. At school, counselors go through a long process to identify the perpetrators. In most cases, they use interviews, observation, documentation studies, and counseling. This takes a long time, and the validity is doubtful. So the counselor needs a valid and reliable instrument to identify a broader range of this vile. The sexual harassment instrument adapted from Annajmi Alfath was re-analyzed to determine its reliability and validity with Rasch modeling.

## Method

The participants included168 students from two Vocational Schools, each sitting in the tenth grade and next door. The first trial was conducted on 90 students from one of the vocational high schools in the city of Padang. There were 51 and 39 female, and male respondents were male, respectively.The second trial was conducted on 78 students, 43 female 35 males.

The studyuses sexual harassment instrument to identify the perpetrators of this vile act. The scale comprised of 37 items using the Guttman Scale to obtain a firm answer to the issues under investigation. The answer "YES"and"NO"aregiven scores of 1 and0, respectively. The inverse rating pattern is found in items number 2, 3, 4, 5, 7, 8, 9, 10, 13, 14, 15, 17, 18 , 19, 21, 22, 25, 16, 27, 30, 31, 32, 33, 36, 37. On these 25 items, the answer "YES" was given a score of 0 while the "NO" was assignedscore 1. Administration of sexual harassment instruments conducted for Vocational High School students in the city of Padang. The approval information was given before respondents took part in the study, and everyone agreed to participate. Data analysis of Sexual Harassment instruments were based on the Rasch model and focused on the measure, fit, anddetection of bias items, as well as person measure and fit. In particular, the WINSTEPS 4.01 software (Linacre, 2006) is used to generate and examine these instruments.

## Results and Discussions

### Quality test instruments for sexual harassment
There are four aspects of testing conducted to determinesexual harassment instruments, including (1) reliability and separation indexes, (2) dimension tests, (3) fit and misfit items, and (4) test information functions (Smith, 1995).

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Table 1. Summary of quality test items

| Estimation | Values |
|---|---|
| Item Reliabilities | .97 |
| Separation Index of Item | 5.93 |
| Mean OUTFIT MNSQ | 1.00 |
| Raw variance explained by measures | 34.8 % |
| Raw variance unexplained by measures | 65.2 % |
| Observed average (Label 1) | -1.23 |
| Observed average (Label 4) | +1.08 |

The reliability of sexual harassment instruments is reviewed. The estimation results in Table 1 show that item reliability is (.97), meaning that the consistency of sexual harassment instruments is at the bestlevel. This is also supported by the index separation value, which set items into five parts, from low to high. The teenagers are not disturbed in finding out the correct answer choices (Label 1) and wrong (Label 4), as shown by the average valuesobserved from logit -1.23 (low) to +1.08 logit (highest). Also, the unidimensional estimation through the main component analysis (PCA) identified the value of the raw variance explained to be 34.8%. This shows that it has achieved the unidimensional condition of the sexual harassment instrument (> 15%) [13]. Therefore,the items involved in measuring sexual harassment instruments are good.Moreover, the categorization of fit and misfit items on sexual harassment instruments can be determinedby comparing the OUTFIT MNSQ value of each instrument item with itsaverage value of logit +1.00. This shows that the outfit value of the mean square is right in the middle square of 1.0 or with an ideal range ( 0.5>MNSQ<1.5). The facts from 26 items tested on adolescents included three items in the sexual harassment instrument that were misfitted, includingno. 21 (+1.71 logit), no. 6 (+1.62 logit), no. 12 (+1.52 logit), and for other items stated accordingly (OUTFIT MNSQ item <+1.44 logit). The extent to which sexual harassment instruments can measure information is identified,as shown in Figures 1 and 2.
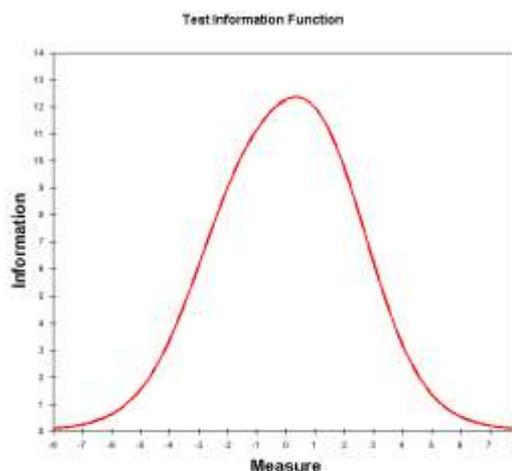


**Figure 1.** Test Information Function (TIF)

From Figure 1, the output of information collected by sexual harassment instruments is at the maximum level for adolescents with high to low abilities, which is less efficient.

**Realization of Youth Performance on Sexual Harassment Instruments based on Rasch Fit Statistics**

The ability of adolescents to work on sexual harassment instruments can be evaluated through individual size and compatibility. Both are used as a basis for determining teenagers who have a high, medium, and low Internet addiction.

**Table 2.** Summary of quality person

| Estimation | Values |
|---|---|
| Person Reliabilities | .85 |
| Separation Index of Person | 2.37 |
| Mean Person | .06 |
| Mean OUTFIT MNSQ | 1.00 |
| Cronbach Alpha (KR-20) Person raw score reliability | 87.0 % |

In general, the ability of adolescents to work on sexual harassment instruments is above average (+.07 logit> 0.00 logit). Their interaction between individuals and items (α= 0.87) is excellent (Sumintono & Widhiarso, 2015).

## Conclusions

In principle, sexual harassment instruments, including reliability, separation index, and unidimensional instruments, are adequate and effective. However, some aspects of theinstruments need to be focused on several things, including (1) inappropriate items or outliers, and (2) measurement information functions that only show optimal valuesfor adolescents withhigh, medium, and low abilities. Outlier items need to be considered or deleted. In terms of measuring the ability of adolescents in sexual harassment instruments, there were outlier respondents. This is because respondents may easily categorize themselves as never or never, and thereforethe right alternative answers are "Yes and No."

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