

Original Research

## COMMUNITY INTENTION IN THE WHISTLE-BLOWING SYSTEM DEVELOPMENT FOR SMOKE-FREE ZONES' LAW ENFORCEMENT IN KENDARI CITY, SULAWESI TENGGARA PROVINCE, INDONESIA

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ABSTRACT

**Background:** Kendari City has set regional regulation No. 16 of 2014 about smoke-free zones (SFZs), however, it has been no tool that is optimal in law enforcement on the application of SFZs regulation in this region.

**Objectives:** This study aims to measure the factors of community intentions in the development of the whistle-blowing systems (WBS) in law enforcement of the SFZs regulation in Kendari City.

**Methods:** The action research approach was carried out with the development of the WBS application which was followed by an observational survey of the community at eight SFZs that had been set in Kendari City.

**Results:** The WBS application for SFZs regulation enforcement in Kendari City was developed through two interfaces: the website on the law enforcement team (Pamong Praja official police and the Health Office) and an Android-based application that can be downloaded for free on the reporting side. Most people of Kendari City have good intentions (90.2 %) in using WBS for SFZs regulation enforcement. This intention indirectly tends to get support from the community ( $OR_{adj} = 5.1$ ). The age of teenagers or students has the highest proportion in intending to use the WBS for SFZs regulation law enforcement other than employees of private ( $OR_{adj} = 3.2$ ).

**Conclusion:** Almost the entire community of Kendari intends to use the WBS to SFZs regulation law enforcement also seen indirectly through social supports. This intention related to the age group of adolescents and the type of work of private employees. Further studies are needed to make one of the SFZs as a pilot project in the implementation of the WBS, e.g. educational institutions as a place for teenagers/students.

**Keywords:** smoke-free policy, whistle-blowing, community perception, public health, Indonesia

## BACKGROUND

As tobacco control effort, Indonesia already rules non-smoking areas, namely the Government Act No. 36 of 2009 concerning health in article 115 paragraph 1 ([Republic of Indonesia Government, 2009](#)). It regulates seven smoke-free zones (SFZs), namely health service facilities, teaching

and learning places, children's places playgrounds, places of worship, public transportation, workplaces, and public places ([Asyary & Veruswati, 2017](#); [Republic of Indonesia Government, 2009](#)). For further in paragraph 2, the central government requires the

local governments to establish an SFZs regulation in their area ([Republic of Indonesia Government, 2009](#); [M. Veruswati & Asyary, 2017b](#)). SFZs regulation declared prohibited for smoking or producing, selling, advertising, and/or promoting tobacco products ([Asyary & Veruswati, 2018](#); [Tobacco Control and Support Center IAKMI, 2011](#)).

The implementation of the SFZs regulation is not only to fulfill the rights of non-smokers to breathe clean and healthy air but also helps smokers to be able to restrain/postpone their smoking habits and as an initial step for smokers to stop smoking ([Ahsan, 2013](#); [M. Veruswati, Asyary, A., Nadjib, M., & Achadi, A., 2018](#)). This regulation has also made many people aware of the dangers of addictive cigarettes and return the norm not to smoke in public places, especially in a closed room ([Barber & Ahsan, 2009](#)).

Kendari City is one of the municipalities that have a vision as a 'livable city' in 2025, through the ecology, information, and technology-based as its mission ([Badan Pusat Statistik, 2018](#)). The concept of 'livable city' is believed by the city government of Kendari as the last phase III to be achieved through sustainable development in phase I of a 'smart and clean city', and phase II of a city in a park namely 'grand city'. Phase I, which was realized in 2007-2012, was based on an ecological approach in structuring the city of Kendari without ignoring social and economic aspects ([Badan Pusat Statistik, 2018](#)).

Implementation of SFZs regulation is a form of local government in carrying out the mandate of constituent legislation as its implementation is the responsibility of all components including individuals, groups, communities and the government ([M. Veruswati & Asyary, 2017b](#)). In order to minimize or reduce the impact of cigarette smoke on the environment, the Kendari city has set SFZs regulation through the regional regulation No. 16 of 2014 ([Dinas Kesehatan Kota Kendari, 2018](#)). However, to date, related stakeholders' states that there are no optimal indicators that can identify the reduction in the negative impact of cigarette smoke through regional SFZs regulation. On the other hand, referring to the utilization of IT (information and

technology) as the Kendari city mission, it is also not yet optimal, especially in the individual reporting function (whistle-blowing-systems - WBS). Thus, an approach needs in developing a WBS application and measuring community intentions to support the application of WBS to the SFZs regulation in Kendari City.

## METHODS

The action research approach was conducted with software application development and carry on with the observational survey on the public to gauge their intention. This study design used to determine the independent variables with dependent variables with quantitative cross-sectional. Subjects of the quantitative survey in this study were the whole respondent's smoker chosen and willing to become the subject of research in eight areas specified as SFZs in Kendari.

The subjects in the study was obtained in eight zones of SFZs in Kendari City namely: hospital, schools, children's playgrounds, places of worship, public transportation, workplaces, public places, and sport facilities. The application of WBS was developed using Android-based software for smartphone that can be installed and available freely in Google Playstore™.

This study has obtained the ethics review from The Health Research Ethical Commission of The Indonesian Public Health Association of Sulawesi Tenggara Province (KEPK IAKMI Sultra) No.: 008/KEPK-IAKMI/XI/2019.

## RESULTS

### WBS Application for SFZs regulation in Kendari City

The WBS application for SFZs regulation was created as a tool to assist local governments in terms of SFZs supervision in Kendari City. The front view of the application as shown in **Figure 1**.

This application has two modules namely 'Home' and 'Complaint Form'. The menu model looks

like the one in Figure 2 and Figure 3 respectively. The 'Complaints Form' feature uses as reporting if violations are found in the SFZs. As shown in Figure 3, the 'Complaint Form' feature contains the name of the reporter, the area of the incident, photo of the incident along with supporting indicators of an area if a violation occurs. With the

WBS application, the Kendari City Government, particularly the Kendari City Health Office and Pamong Praja official police, can carry out supervision and further action in making policies relating to smoking and passive smokers in an SFZs.

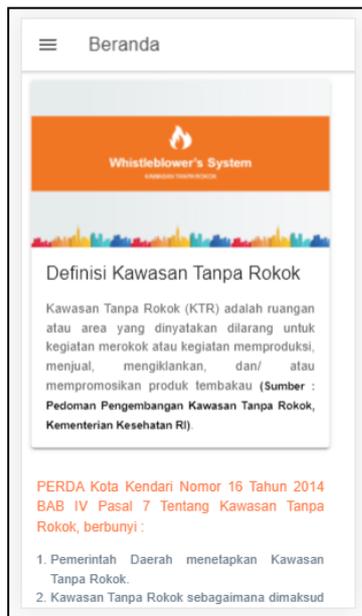


Figure 1 WBS of SFZs regulation in Kendari City interfaces

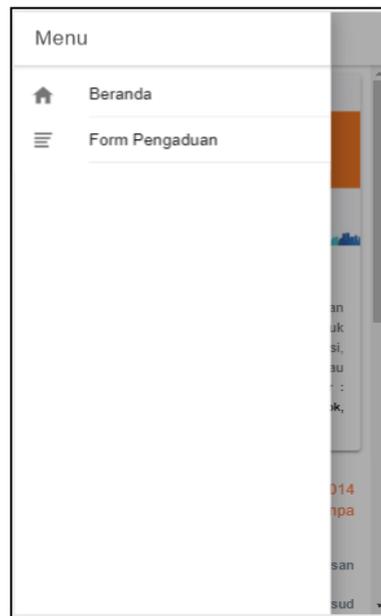


Figure 2 Application Menu

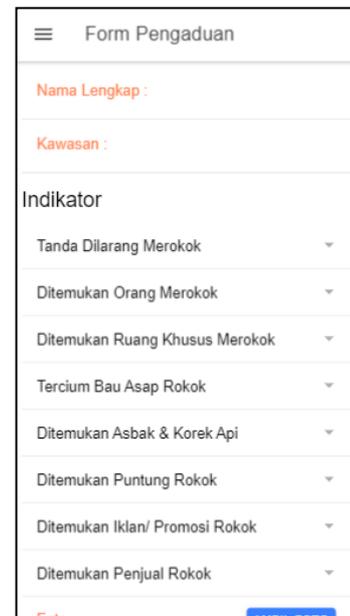


Figure 3 Complaint Form

### WBS Intention for SFZs Regulation

Most people of Kendari City have good intentions (90.2%) in using WBS for SFZs regulation law enforcement. Based on the inferential analysis of factors that influence intention to use WBS for SFZs regulation, three variables contribute to the final analysis of multivariate namely age, type of work, and support. Although all of these variables did not show a direct relationship ( $p\text{-value} > 0.05$  - not a predictor/indirect variable), but this variable contributes indirectly in measuring intentions using WBS for SFZs regulation (Table 1).

The intention to develop WBS for SFZs regulation indirectly tends to get support from the community 5.1 times. Besides, the age group of

teenagers as a reference in this analysis showed a higher intention than the rest group ages and the elderly indirectly. This means that teenagers will tend to adopt the WBS for SFZs regulation when it is applied later. This potential is also shown from the type of work, that students have a higher proportion of tendencies to intend to use the WBS for SFZs regulation besides private employees. Even so, private employees who have the highest tendency of the employment variable to 3.2 times higher intention to apply the WBS for SFZs regulation. It can be concluded that educational institutions such as secondary schools (junior or senior high schools) as well as private companies are the most likely places to accept when WBS for SFZs regulation applied.

**Table 1** WBS intention for SFZs regulation

Variable	Intense to use WBS in SFZs regulation		Chi-square (Bivariate)			Multiple Logistic Regression (Multivariate)		
	No (%)	Yes (%)	P-value	OR <sub>crude</sub>	95% CI	p-value	OR <sub>adj</sub>	95% CI
<b>Age</b>								
Teen ( $\leq 19$ years)	0 (0.0)	14 (100.0)	1.000	Ref		1,000	Ref	Ref
Adult (20-55 years old)	4 (15.4)	22 (84.6)	0.999	0.000	NA	0.997	0.000	NA
Elderly ( $\geq 56$ years)	0 (0.0)	1 (100.0)	1.000	1.000	NA	0.999	0.000	NA
<b>Gender</b>								
Male	4 (10.0)	36 (90.0)	1.00	0.900	0.812-0.998	NA	NA	NA
Female	0 (0.0)	1 (100.0)						
<b>Educational level</b>								
Elementary school	1 (50.0)	1 (50.0)	0.695	Ref		NA	NA	NA
Junior high school	0 (0.0)	11 (100.0)	0.999	1.615	NA			
Senior high school	2 (13.3)	13 (86.7)	0.244	6.500	0.280-151.123			
Bachelors	0 (0.0)	11 (100.0)	0.999	1.615	NA			
Masters	1 (50.0)	1 (100.0)	1.000	1.000	0.020-50.397			
<b>Occupational status</b>								
Not-working/student	2 (10.0)	18 (90.0)	0.905	Ref		1,000	Ref	Ref
Civil servant/Militaries	1 (7.7)	12 (92.3)	0.822	1.333	0.108-16.392	0.998	0.000	NA
Entrepreneur								
Private employees	1 (20.0)	4 (80.0)	0.546	0.444	0.032-6.188	0.998	0.000	NA
	0 (0.0)	3 (100.0)	0.999	1.795	NA	0.999	3.231	NA
<b>Knowledge</b>								
Poor	4 (9.8)	37 (90.2)	NA	NA	NA	NA	NA	NA
Fair	0 (0.0)	0 (0.0)						
<b>Attitude</b>								
Poor	0 (0.0)	2 (100.0)	0.812	1.114	1.002-1.239	NA	NA	NA
Fair	4 (10.3)	35 (89.7)						
<b>Commitment</b>								
Poor	0 (0.0)	2 (100.0)	0.812	1.114	1.002-1.239	NA	NA	NA
Good	4 (10.3)	35 (89.7)						
<b>Support</b>								
Poor	4 (26.7)	11 (73.3)	0.013	0.733	0.540-0.995	0.997	5.102	NA
Fair	0 (0.0)	26 (100.0)						

## DISCUSSION

Kendari City has established SFZs regulation since 2014 ([Dinas Kesehatan Kota Kendari, 2018](#)). However, people have poor knowledge about this regional regulation. This can lead to a lack of adherence to SFZs regulation in public places where smoke is prohibited. Violation of a misdemeanor is finally to be anticipated both in terms of appeal and enforcement of penalty (law enforcement) ([Ahsan, Wiyono, Setyonaluri, Denniston, & So, 2014](#)). Anticipation through the function of monitoring and evaluation of

regulations is essential in ensuring the enforcement of SFZs regulation in the regulated areas ([Sebayang, Dewi, Lailiyah, & Ahsan, 2019](#)).

WBS provides an opportunity to present internal reporting in real-time so that it can be followed up responsively based on real evidence constitutionally ([Park, Blenkinsopp, Oktem, & Omurgonulsen, 2008](#); [Srividhya & Stalin, 2012](#)). Prohibited smoking behavior in SFZs regulation can be reported by capturing through images by the reporter. It can be directly sent via an online application in the gadget of each reporter.

Furthermore, the local government in its enforcement function for reports of violations in the community can receive messages through the application (receiver) about who the violators and reporters, place, evidence and time of the incident.

This study found that socialization is the most important and most essential attention in the reporting, monitoring, and evaluation of SFZs regulation in Kendari City. Even though the community has a good perception shown by good attitude, commitment, support, and intention to use WBS for SFZs regulation, but if they have poor knowledge, it is feared that the implementation will not be optimal. Local governments not only need to socialize the existence of regulations when they will be made or implemented in the beginning ([M. Veruswati & Asyary, 2017a](#), [2017b](#)).

Local governments through the task force are required to provide information education on an ongoing basis regarding the implementation of a regulation ([Astuti & Freeman, 2017](#)). On the other hand, the community can actively participate through activities as well as supporting the government in every regulation that is implemented ([Asyary, Purwastyastuti, & Junadi, 2017](#); [Asyary & Veruswati, 2018](#)). Various experiences have been implemented in the application of SFZs regulation in several regions in Indonesia, such as Bogor City ([Asyary & Veruswati, 2018](#)). Each local government is actively carrying out routine actions and cooperating with the community in routine and active activities in always promoting the smoking ban and SFZs regulation.

## CONCLUSION

The community intention of Kendari City in the development of WBS to SFZs regulation relates to or tends to get the support of society indirectly. The community's intention in using WBS for SFZs regulation also indirectly tends to be used by the younger group of age (teenagers/students) and the type of work of private employees. Further studies are needed to make one of the SFZs as a pilot project in the implementation of the WBS,

e.g. educational institutions as a place for teenagers/students.

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