

HEALTH EDUCATION TO RELIGIOUS AND TRADITIONAL LEADERS IMPROVES KNOWLEDGE, ATTITUDE AND ACTION IN SUPPORTING THE DETECTION OF NEW CASES OF LEPROSY

Saimi Saimi , Ade Surya Firmansyah , I Putu Suraoka ✉

Master of Health Administration Study Program, Qamarul Huda Badaruddin Bagu University, Praya, West Nusa Tenggara, Indonesia
Bima City Health Office, West Nusa Tenggara Province, Indonesia
Polytechnic of the Ministry of Health, Denpasar, Bali, Indonesia

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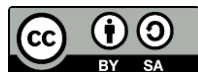
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ABSTRACT

Leprosy is still a serious health problem in Indonesia. The rate of transmission of this disease is still high, but the discovery of new cases is low and the rate of dropping out of treatment is high. This indicates that the strategies for treating leprosy that have been implemented so far have not been effective enough. So appropriate efforts are needed to overcome the problem comprehensively and sustainably. to determine the increase in knowledge, attitudes and actions of religious and traditional leaders after being given health education about leprosy. Quasi-Experimental with one group pretest-posttest design. Population: are religious leaders and traditional leaders. The sample size was 50 people. Results: there was a significant increase in the variables of knowledge (p -value <0.05), positive attitudes (p -value <0.05), and actions (p -value <0.05) from religious leaders and traditional leaders regarding leprosy after the intervention. Traditional and religious leaders have a joint commitment to eradicate Hansen's Disease after intervention. Educational interventions for religious and traditional leaders significantly increased the knowledge, attitude and actions in supporting new case detection rate of leprosy. This intervention model can be followed up by relevant stakeholders to solve the problem of detecting new cases of leprosy.

ABSTRACT

Penyakit kusta masih menjadi masalah kesehatan yang serius di Indonesia. Angka penularan penyakit ini masih tinggi, namun penemuan kasus baru rendah dan angka putus pengobatan tinggi. Hal ini mengindikasikan bahwa strategi penanganan penyakit kusta yang selama ini diterapkan belum cukup efektif. Sehingga diperlukan upaya yang tepat untuk mengatasi masalah secara komprehensif dan berkelanjutan. Tujuan penelitian ini untuk mengetahui peningkatan pengetahuan, sikap dan tindakan tokoh agama dan tokoh adat setelah diberikan edukasi kesehatan tentang penyakit kusta. Metode penelitian ini adalah Quasi Eksperimen dengan rancangan one group pretest-posttest design. Populasi: tokoh Agama dan Adat. Besar sampel sebanyak 50 orang. Terdapat peningkatan yang signifikan pada variabel pengetahuan (p balue <0.05), sikap positif (p -value <0.05) dan tindakan (p -value $<0,05$) dari para tokoh agama dan adat tentang penyakit kusta setelah dilakukan intervensi. Para tokoh agama dan adat memiliki komitmen bersama memberantas penyakit kusta setelah dilakukan intervensi. Intervensi pendidikan kesehatan kepada Tokoh agama dan tokoh adat signifikan meningkatkan pengetahuan sikap dan tindakan dalam mendukung deteksi kasus baru penyakit kusta. Model intervensi ini dapat ditidakanjuti oleh stakeholder terkait sebagai solusi pemecahan masalah deteksi kasus baru penyakit kusta.

✉ Corresponding Author:

I Putu Suraoka
Poltekkes Kemenkes Denpasar, Bali, Indonesia
Telp. 081236458425
Email: suraoka@gmail.com

INTRODUCTION

Leprosy is an infectious disease that can cause disability. Leprosy is caused by the bacterium *Mycobacterium leprae* (Indasah, 2008). Poor management of leprosy cases can cause leprosy to become progressive, causing permanent damage to the skin, nerves, mucosa of the respiratory tract, extremities and eyes (Ministry of Health RI, 2019). The proportion of multibacillary (MB) leprosy cases in children (0-14 years) is increasing. Based on data from the Ministry of Health, the proportion of MB type leprosy during the 2011-2021 period. The provinces with the highest proportion of MB leprosy in 2021 are West Kalimantan (97%), Yogyakarta Special Region (96%), and Southeast Sulawesi (96%) and West Nusa Tenggara Province has 559 cases (Ministry of Health RI, 2022).

The Indonesian Ministry of Health noted that the prevalence of leprosy is still high, the discovery of cases of multibacillary (MB) leprosy in children shows that there are high hidden sources of transmission of leprosy in the community, but there are no new breakthroughs in addressing problem solving. The high number of leprosy cases in Brazil with the Multibacillary type requires a health promotion strategy to find cases as a control effort (Monteiro et al., 2019). To speed up the treatment of leprosy cases, good methods are needed to avoid disability (Tashiro et al., 2020). To treat leprosy, there needs to be women's involvement and political commitment (Brandão et al., 2022). There are clinical differences in the types of leprosy in America and Asia, so a Covid-19 approach is needed so that it needs better and optimal treatment (Repsold, 2022). Malnutrition can also cause comorbidities in leprosy sufferers (Dennison et al., 2021). Leprosy is an old disease that must be resolved, there is a social stigma in society that can damage people's mentality, because new methods, new breakthroughs are needed to break the chain of transmission (Santacroce et al., 2021). Brazil declared war against leprosy (Miguel et al., 2021).

Solving problems using a local wisdom approach, namely forming religious and traditional leaders as community-based surveillance, through educational interventions for religious and traditional leaders to eliminate stigma in society and the assumption that leprosy is a disgrace. A community-based approach is an appropriate strategy to increase the detection of leprosy in the community. The stigma of leprosy in society is still high, but the massive approach to religious leaders and leaders will disappear (Nanri, 2022), delays in treating leprosy will have an impact on disability and death (Mwageni et al., 2022).

Leprosy is a challenge that must be eliminated because it is contagious, a good approach is needed for the community to provide immediate treatment (Gnimavo et al., 2020). Leprosy has dangerous effects and can appear for a long time, so it is a good treatment (Iraha et al., 2022). To increase case detection and break the chain of transmission, concrete steps are needed. The research aims to provide educational interventions about leprosy to leaders, namely religious leaders and traditional leaders as community-based leprosy tracking surveillance to increase the New Case Detection Rate (NCDR) of leprosy.

METHOD

Types of research

This research uses a questionnaire instrument developed by the researcher himself. Before being used, the questionnaire was tested and tested for validity and reliability. Data collection was carried out twice, preliminary measurement (pre-test). Performed before the intervention to measure the initial condition, being a comparator to see the changes that occur after the intervention is given. Final measurements (post-test) are performed after the intervention. Furthermore, the post-test results will be compared with the pre-test results to determine the effect or impact of the intervention given. The research instrument was used after being tested for validity, and was declared statistically significant ($p < 0.05$), and the reliability test value was declared reliable based on Cronbach's Alpha measurement, the reliability value ≥ 0.7 so it was declared reliable.

Research Location and Time

Research was carried out in Raba District and East Rasanae District, Bima City, West Nusa Tenggara Province, Indonesia. The research was carried out from November 2023 to December 2024.

Population and Sample

The research population is religious leaders and traditional leaders in Raba District and East Rasanae District, Bima City, West Nusa Tenggara Province. The samples taken were 50 people. The sample was determined purposively based on the inclusion and exclusion criteria that had been determined before the research was conducted and the willingness of the figures.

Data collection

Data collection was carried out before and after the intervention. The data collection method is by interview using a questionnaire. The research instrument using a questionnaire as a data collection instrument in this research has been tested for validity and reliability.

Processing and analysis of data

The data that has been collected is tabulated, analyzed for normality of the data and analyzed descriptively. Hypothesis testing uses a statistical analysis of pretest and posttest data using the Paired T Test.

RESEARCH RESULT

The results of the aggregate description analysis of all research variables show differences in results between *pre-test* and *post-pest*, there was an increase in the *mean* value of 38.21%. This means that the statistical figures prove the significance of the increase after the intervention. The next stage of statistical analysis is normality analysis of *pre-test* and *post-pest data* using Kolmogrov Smirnov analysis, as a prerequisite for the next stage of analysis, as in table 2 below:

Table 1 Data normality test with Kolmogorov Smirnov

Variable	n	Statistics	Pretest	Posttest	
			Sig.	Statistics	Sig.
Knowledge	50	0.058	0.089	0.11	0.098
Attitude	50	0.049	0.3	0.025	0.2
Behavior	50	0.051	0.2	0.073	0.142

The results of Kolmogrov Smirnov's statistical analysis show that the overall data is normally distributed, namely that there is a sig value. $>$ from the value $\alpha=0.05$, meaning that the entire research data is normally distributed as a basis for decision making to be able to carry out the next stage of statistical analysis. The next statistical analysis to test the differences in *pre-test* and *post-pest results* uses the Paired T Test, in table 3 below:

Table 2 Differences in Knowledge, Attitudes and Actions before and after the intervention

Variable	n	Pretest mean	Posttest mean	R	df	p-value
Knowledge	50	35.89	76.16	0.40	47	0.002
Attitude	50	34.33	78.04	0.43	47	0.001
Behaviour	50	42.28	72.81	0.30	47	0.001

n= sampel; R= Correlation Coefficient; df=degree of freedom

Analysis of the description of the knowledge variable after the intervention found a Correlation Coefficient (R) of 0.40, and analysis of the paired t test p-value $0.002 <$ of the value $\alpha=0.05$. This means that there is a significant increase in knowledge about leprosy after the intervention.

Analysis of the description of the Attitude variable after the intervention found a Correlation Coefficient (R) of 0.43, and analysis of the paired t test p-value $0.001 < \alpha = 0.05$. This means that there is a significant change in positive attitudes about leprosy after the intervention

Analysis of the description of the Behavior variable after the intervention found a Correlation Coefficient (R) of 0.30, and analysis of the paired t test p-value $0.001 < \alpha = 0.05$. This means that there is a significant change in action/behavior, namely that the leaders have a joint commitment to eradicate leprosy after the intervention

DISCUSSION

Interventions in theory create innovative ways to overcome certain circumstances, depending largely on the right approach. The main goal of health education is for people to be able to apply their own problems and needs, understand what they can do to overcome the problem, by optimizing the resources available to them and support from outside. This will enable them to decide on appropriate activities to improve their standard of living. Interventions not only repeat old ideas, but also use skillfully applied behavioral theories to develop new solutions tailored specifically to solve the problem at hand (Smith, LH, Holloman, C, Elder, JP, Holub, Arredondo, Maria Sanchez-Romero, Moreno Saracho, Barquera, 2014). Stigmatizing and discriminatory actions were born due to wrong interpretations about the transmission of leprosy. A culture that views leprosy as a hereditary disease has led to the development of wrong interpretations. This makes leprosy hidden, accumulating into a culture that is not open and is feared by society. Intervention is needed to straighten out understanding and eliminate the stigma towards leprosy sufferers.

Knowledge is the result of the process of knowing, which occurs after someone senses a particular object. Cognitive components are representations that individuals believe. The cognitive component contains the perceptions and beliefs that individuals have based on the information received. Correct and positive understanding will form good behaviour (Saimi, 2021). Good knowledge in the community about leprosy will show positive behavior. After the intervention, there was an increase in understanding that leprosy is an infectious disease that can be cured properly through appropriate treatment. This will help eliminate stigma and discrimination against sufferers.

Clifford Geertz, an anthropological scientist, defines culture as a mechanism of symbolic meaning that describes an object, action or event in the world that can be observed, felt and understood. This suggests a meaning in the minds of every individual human being in society. According to Geertz, culture is a social fact that is collectively owned by people within their social group. Culture reflects identities, values and norms that are formed through interactions and shared experiences in a community. A deep understanding of culture can help strengthen a sense of belonging, mutual respect, and create social harmony amidst the diversity of society (Irwan et al., 2023). Leprosy sufferers are isolated in social interactions in society, starting from individual and group ignorance of the real disease of leprosy. The implication is that there is growing belief in myths about leprosy which are believed by the public to be true. The correct reconstruction of knowledge, based on the values and cultural norms of society, is the starting point in preventing disharmony in social relations. This can include the family environment, general society, workplace, and the wider social environment. With proper understanding, stigma and discrimination against leprosy sufferers can be minimized, so that they can again actively participate in social life.

Research conducted in Eastern Ethiopia revealed that unfavorable attitudes towards the problem of leprosy among the community were caused by low knowledge about this disease. The belief that leprosy is a hereditary disease, as well as the emergence of stigma and discrimination among the community, make them reluctant to know the status of their disease. This problem can be caused by low knowledge about leprosy, resulting in poor attitudes towards treatment and difficulties for health workers in treating it. However, for those who have good knowledge, they will be positive and active in carrying out examinations and treatment. Increasing education and proper understanding about leprosy can help eliminate stigma, so that sufferers can receive proper support and care from the community (Urgesa et al., 2020). Intervention with religious and community leaders is a form of community empowerment and involvement in the health sector. This approach is a strategy to eliminate the stigma and negative understanding of society regarding leprosy. The public is educated that leprosy is not a

curse and a hereditary disease, but a disease that can be cured through medical treatment. It is important to promote good health, communicate information and educate the public so that they have good knowledge about leprosy

Health behavior theories can be applied to a variety of cultural and ethnic groups, but health practitioners must understand the characteristics of the target population, such as ethnicity, socio-economic status, gender, age, and geographic location. With a comprehensive understanding of the socio-cultural context, these theories can be used appropriately to develop health interventions that are effective and appropriate to community needs. A culturally sensitive approach will facilitate acceptance and active participation from various groups, so that it can encourage changes in sustainable healthy living behavior (Smith, LH, Holloman, C, Elder, JP, Holub, Arredondo, Maria Sanchez-Romero, Moreno Saracho, Barquera, 2014). Educational interventions based on local wisdom for religious and traditional leaders can increase community participation in case finding and treatment. Leprosy more quickly. Tracing cases in the families around sufferers is also an important strategy to break the chain of transmission. By involving informal leaders, promotional and preventive efforts can be well received by the community (Barbosa et al., 2022).

Leprosy must be treated immediately because it has a high risk of transmission. Early treatment can prevent disabilities that impact the sufferer's quality of life. Quick and appropriate intervention will break the chain of transmission and minimize the negative impact of this disease (Dos Santos et al., 2022). Increasing the competency of health workers is important to increase the detection of leprosy cases. This will ensure early detection and appropriate treatment, as well as provide quality services for patients. Investment in human resource capacity development is the key to effective leprosy control (Naidu et al., 2021). Leprosy is an infectious disease that requires strategic treatment to break the chain of transmission. Efforts such as early detection, appropriate treatment, as well as education and support for sufferers and their families, are very important. With fast and comprehensive action, the risk of transmission can be effectively minimized (Marega et al., 2022). Treatment of leprosy can cause undesirable side effects. Therefore, administering combination drugs is very important to minimize these negative impacts. With close supervision and monitoring, the right treatment regimen can be determined, so that sufferers can undergo therapy safely and comfortably. This will support patient compliance in completing treatment as recommended and achieving optimal healing (Norman et al., 2022).

Education based on local wisdom is a good strategy to increase the discovery of new cases of leprosy. The public's low knowledge about infectious diseases, as well as the assumption that leprosy is a hereditary disease, causes sufferers to tend to hide and be reluctant to seek treatment. With a culturally sensitive approach, public understanding can be increased, stigma can be reduced, and sufferers are encouraged to get treatment immediately. These efforts will help break the chain of transmission and achieve effective elimination of leprosy (Urgesa et al., 2021). The latest research findings strengthen previous studies related to leprosy. The research results show that people with low knowledge tend to have negative attitudes, such as stigmatization and rejection of sufferers. On the other hand, people who have a good understanding of leprosy will have a more positive attitude and support prevention efforts. This information emphasizes the importance of comprehensive educational interventions to increase public awareness and understanding, thereby creating a more conducive environment for sufferers (Urgesa et al., 2020).

Although cases of leprosy are relatively rare in America, recent research has revealed that it still occurs, especially the multibacillary type. Efforts to complete the chain of transmission remain a priority. By strengthening the surveillance system, increasing access to health services, and carrying out early detection and comprehensive treatment, it is hoped that new cases can be prevented effectively. Collaboration between the government, health professionals and the community will support the successful elimination of leprosy in this region (Mohan & Fairley, 2020). Comprehensive education for patients is very important. With a good understanding of the importance of treatment adherence and awareness of the impact of treatment, patients can be encouraged to complete therapy completely. This will prevent the emergence of resistant strains of leprosy, so that treatment remains effective and the recovery process can run optimally (Rajan et al., 2021). To prevent transmission within the family, leprosy sufferers who are undergoing initial treatment need to self-isolate. This action helps break the chain of transmission and protects vulnerable family members. With support and understanding from the family, sufferers can carry out isolation comfortably. As treatment progresses and conditions

improve, sufferers can slowly interact with their families more safely. These efforts contribute to the recovery process and effective prevention of transmission (Arenas et al., 2022).

Leprosy sufferers are at high risk of experiencing disability if not treated immediately. Therefore, early treatment is very important. With early detection and appropriate treatment, disability can be effectively prevented. This quick action not only restores the sufferer's physical condition, but also protects them from stigma and discrimination due to disability. This effort contributes to improving the quality of life of sufferers and supports efforts to eliminate leprosy as a whole (Trujillo-Ramirez et al., 2022). The location of leprosy sufferers is generally concentrated in certain areas. This provides an opportunity for effective tracking efforts. By conducting investigations around the sufferer's residence, the health team can identify close contacts and carry out early screening. This proactive action allows for rapid detection of new cases, so they can be treated immediately. This comprehensive and coordinated approach will accelerate the process of eliminating leprosy in the region (Urgesa et al., 2021). The pattern of spread of leprosy in the world has changed from the past to the present. Nowadays, high community mobility is an important factor that needs to be watched out for. However, with good understanding and appropriate vigilance, disease control efforts can be carried out more effectively. Collaboration between the government, health workers and the community in monitoring, early detection and taking comprehensive preventive measures will support the sustainable elimination of leprosy (Pfrengle et al., 2021).

Previous studies have enriched understanding of how society in the past viewed and treated leprosy sufferers. Collaborations between researchers from different disciplines, such as history and bioarchaeology, have provided valuable evidence. Analysis of eight leprosy cases from the Avar period in the Danube-Tisza Interfluve region, Hungary, shows the existence of social disparities regarding the biological consequences of living with leprosy. Irreversible physical changes, such as disability and limited mobility, take a toll on sufferers and limit their participation in social situations. Burial evidence may explain the stigmatization leprosy sufferers experienced in the past. A deep understanding of community perceptions in the past can enrich current leprosy treatment and elimination efforts, by considering related socio-cultural aspects (Spekker et al., 2023). Studies conducted in Hungary strengthen findings regarding the stigmatization problems faced by leprosy sufferers. Facts in the field show that there is behavior of sufferers who hide their identity or avoid being known to have leprosy, because of the stigma in society. Even sufferers who are undergoing treatment have the potential to experience failure or stop taking their medication because they are worried that their identity will be known. This condition shows the need for a wise and prudent approach to provide protection and moral support for sufferers in the surrounding environment, so that stigmatization can be minimized. Comprehensive efforts involving the community will greatly help in eliminating leprosy.

Educational interventions based on local wisdom for three months can massively reduce social stigmatization of leprosy patients in the community. By involving religious and traditional leaders, the correct understanding can be spread that leprosy is an infectious disease that can be cured, not a curse. Through an approach that respects local cultural values, it is hoped that it can reduce negative views and encourage acceptance and support for leprosy sufferers in the surrounding environment (Santacroce et al., 2021). To prevent the transmission of leprosy, comprehensive education for the community is very necessary. The public needs to have good knowledge about how leprosy is transmitted so they can take appropriate preventive measures, such as avoiding close contact with sufferers. With adequate understanding, the community can play an active role in prevention efforts without falling into stigmatization. Education based on scientific facts will help the public have a wiser attitude and support efforts to treat leprosy as a whole (Deps et al., 2020). Good knowledge of leprosy sufferers will encourage them to be more active in detecting new cases of leprosy. The community's positive attitude by avoiding excessive close contact can help prevent the transmission of leprosy. This effort needs to be supported by comprehensive education so that people have a proper understanding of leprosy, so they can play an active role in prevention without causing stigmatization. Collaboration between sufferers, the community and related parties will be very effective in eliminating leprosy (Urgesa et al., 2020).

Leprosy sufferers who are treated early have a good chance of recovery. On the other hand, sufferers who receive treatment too late will be at risk of experiencing disability. Therefore, early detection and immediate treatment are very important to minimize the adverse effects of this disease. This effort needs to be supported by increasing public awareness so that sufferers do not hesitate to immediately check themselves and receive treatment. Collaboration between sufferers, health workers

and the community will encourage effective elimination of leprosy (Mwageni et al., 2022). Newly discovered leprosy sufferers currently have the potential to transmit the disease due to close contact with family or other sufferers. Therefore, early detection and voluntary separation of sufferers is very important to break the chain of transmission. The community needs to be supported with comprehensive education so they can understand how leprosy is transmitted and play an active role in prevention efforts without causing stigma. Collaboration between sufferers, families, health workers and the community will be very effective in eliminating leprosy (McCormick et al., 2019). Delay in treatment of leprosy sufferers has the potential to cause transmission to family or people who have had direct or close contact with the sufferer. Therefore, early detection and timely treatment are essential to break the chain of transmission. The community needs to be supported with comprehensive education so that they can understand how leprosy is transmitted and actively participate in prevention efforts without falling into stigmatization. Collaboration between sufferers, families, health workers and communities will increase the success of eliminating leprosy (Marega et al., 2022). Unfortunately, leprosy is still considered a disgrace by some in society, so that stigma not only occurs among sufferers, but also spreads to their families and surrounding environment. To overcome this, comprehensive educational efforts are needed to increase public understanding. With good understanding, it is hoped that stigma and discrimination can be minimized. Society needs to be encouraged to be more open, empathetic and supportive towards sufferers and their families. Collaboration of various stakeholders will greatly support efforts to eliminate leprosy holistically (Tembei et al., 2022).

The Health Belief Model (HBM) is a framework that discusses individual perceptions regarding the threat of health problems, such as the level of vulnerability and severity of disease. This model also identifies the individual's benefits in avoiding the threat, as well as factors that influence the decision to act, such as barriers, cues to action, and self-efficacy. With a good understanding of HBM, promotive and preventive efforts in the health sector can be designed more effectively, increasing active community participation. This will contribute significantly to the success of public health programs (Smith, LH, Holloman, C, Elder, JP, Holub, Arredondo, Maria Sanchez-Romero, Moreno Saracho, Barquera, 2014). Leprosy still tends to be stigmatized by society, so a cultural approach is needed that involves local religious and traditional leaders. Collaboration between the government, non-governmental organizations, religious leaders and community leaders will be very effective in dealing with and preventing the spread of leprosy. With support from various stakeholders, public understanding can be increased, stigma can be eliminated, and sufferers can be supported comprehensively. It is hoped that this joint effort can contribute significantly to the success of the leprosy elimination program in Indonesia (Jay et al., 2021).

In the Islamic religious view, every disease has a cure, including leprosy. Therefore, high stigmatization in society is not caused by religious factors, but rather is the result of inadequate treatment of sufferers. This can have an impact on the sufferer's physical and mental disabilities. Comprehensive treatment efforts, supported by good public understanding, can help remove stigma and encourage sufferers to receive treatment immediately. Collaboration between religious leaders, health workers and the community will be very effective in realizing this goal (Hasnain et al., 2020). To eliminate the public stigma related to leprosy, educational efforts are needed that involve all parties. With adequate understanding, individuals and society will realize that this disease is caused by bacteria and can be cured. This will reduce the fear and stigma that has existed. Treatment as early as possible is also very important to prevent disability in sufferers. Collaboration of various stakeholders, including health workers, community leaders and the government, will greatly support the success of the holistic leprosy elimination program (Muldoon et al., 2022).

CONCLUSIONS AND RECOMMENDATIONS

This research uses a questionnaire instrument developed by the researcher himself. Questionnaire before use in trials. The results of the study showed that there was a significant increase in knowledge, attitudes and actions of religious and community leaders after being given health education about leprosy. This has a positive impact because it supports the discovery of new cases of leprosy. The involvement of these key figures is very important, because they have strong influence and trust in society. Through collaboration between health workers, government and community leaders, efforts to eliminate leprosy can be carried out holistically and sustainably.

RECOMMENDATION

The educational intervention model based on local wisdom for religious and traditional leaders needs to be carried out on an ongoing basis and can be used as a reference to be implemented by the government as a problem-solving solution in an effort to increase the number of hidden infectious diseases.

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