



## DEVELOPMENT OF A QUESTIONNAIRE TO ASSESS COVID-19 PREVENTION BEHAVIOR OF CLINICAL CLERKSHIP STUDENT IN FACULTY OF MEDICINE ANDALAS UNIVERSITY

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### Abstract

**Background:** During the Covid-19 pandemic, clinical clerkship students must understand good Covid-19 prevention behavior because they have been directly contacting health workers and patients in hospitals. However, until now, there has been no research on Covid-19 prevention behavior aimed at clinical clerkship students in Indonesia. The use of a questionnaire that has been tested for validity and reliability is necessary. **Objective:** The purpose of this study was to develop a questionnaire about Covid-19 prevention behavior in clinical clerkship students. **Methods:** This study is a descriptive study with a cross-sectional design. The sampling technique used consecutive sampling with a sample size of 45 students of clinical clerkships in the medical profession, Faculty of Medicine, Andalas University. **Results:** The validity test was carried out with a qualitative and quantitative approach to experts and test respondents. The final result of the content validity of two rounds of the Content Validity Index (CVI) is 1.00, so the questionnaire is valid with 33 question items. The reliability of the knowledge section measured with Kuder Richardson-21 was 0,888, while in the attitude and practice section, using the alpha coefficient formula, were 0.682 and 0.8816, respectively. **Conclusion:** The developed questionnaire was declared valid and reliable. This questionnaire can be used to measure Covid-19 prevention behavior in clinical clerkship students.

**Keywords:** Questionnaire development, Knowledge, Attitude, Practice, Covid-19, Clinical Clerkship Student.

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## INTRODUCTION

Coronavirus Disease 2019 or better known as Covid-19 is an infectious infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). SARS-CoV-2 is a type of corona virus that has never been found in humans before. 1 Graph of the number of infected cases and those who died in Indonesia continued to increase as of May 10 2020 with 1,398,578 new cases, 37,932 deaths and 1,216,433 recovered cases those recorded after 1 year of Covid-19 are designated as a pandemic

At the beginning of the Covid-19 pandemic, clinical clerkship students were still carrying out study activities at a teaching hospital. According to research by Bongomin et al. (2021) to 188 clinical clerkship students at the internal medicine station at Makerere University, Uganda, stated that overall clinical clerkship students felt at risk of contracting Covid-19 during rotation, moreover more than two-thirds of students agreed that it was difficult for them to follow standard operating procedures for Covid-19 control when serving patients and about a third of students feel they do not have adequate personal protective equipment during rotation.3

During the Covid-19 pandemic, clinical clerkship students actually had confidence in their knowledge of Covid-19 but they had concerns about contracting Covid-19 while carrying out clinical clerkship work at a hospital. 4 An alternative is that clinical clerkship practice can be carried out online. However, this would interfere with the timely achievement of academic goals and the implementation of clinical

skills that should already be carried out directly with the patient under the supervision of the receptor. This is in line with research conducted by Santi et al. (2021) which states that clinical clerkship students who carry out their studies using the distance learning method cause clinical clerkship competencies to be hampered in interacting with patients. 5 Therefore, it is necessary to develop clinical clerkship programs that enable clerkship students to be actively involved in hospital practice under Strict safety guidelines focused on preventing infection and transmission of the virus.4

According to data from the Diagnostic and Integrated Research Laboratory of the Faculty of Medicine, Andalas University, there were 178 clinical clerkship students of the medical profession, Andalas University Faculty of Medicine who were infected with Covid-19 as of December 2021. The data shows that the behavior of Covid-19 prevention has not been fully carried out adequately by all elements in the hospital including clinical clerkship students. This is also supported by Driposwana et al. (2021) which was conducted on students of 3 health study programs showed that more than half of health students did not comply with the Covid-19 protocol after more than one year of the Covid-19 pandemic. form of knowledge, attitudes, and actions.7

Research by Sondakh et al. (2021) shows that there are still many medical students who do not have good knowledge about Covid-19. In addition, although most students have a positive attitude, more than half of them lack discipline in implementing preventive measures, especially in terms of taking vitamins and





exercising, but the majority have implemented the use of masks and personal hygiene. The current pandemic provides important lessons for medical colleges to design curricula and prepare students to make positive contributions when a pandemic occurs.

## RESEARCH METHODS

The procedure for collecting and collecting this data using the blueprint that the author has made will then be validated by a panel of experts then tested for the reliability of the questionnaire with computerized analysis of the behavior of Covid-19 prevention which was distributed in the form of a google form to clinical clerkship students of the medical profession, Faculty of Medicine, Andalas University . Data analysis was in the form of qualitative and quantitative content validity tests and reliability tests. In the content validity test using the Content Validity Index (CVI) and language comprehension test then a reliability test was carried out which was obtained through a computerized analysis program using the Kuder Richardson-21 to assess the reliability of the knowledge section and the alpha coefficient formula for the attitudes and actions section. This research has passed an ethical review with letter number 635/UN/16/2/KEP-FK/2022.

The author compiled a blueprint based on the results of a literature review with the results of 7 questions to measure the knowledge section, 7 statements to measure the attitude section, and 12 questions to measure the Covid-19 prevention action section for clinical clerkship students. The first part is knowledge to measure understanding of

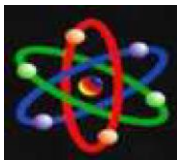
Covid-19 prevention, the second part is attitude to measure assumptions about Covid-19, and the third part is action to measure a person's response to health protocols originating from outside and within the individual during the Covid-19 pandemic. 19. The total number of questions in the initial design of the questionnaire was 26 items.

The validation stage carried out in the development of this questionnaire is to test the validity of the content (content validity) which is carried out by testing the feasibility or relevance of the test through rational analysis by competent experts (expert judgment). The content validation process was carried out by 5 experts from the fields of Pulmonary and Respiratory Medicine, Ear Nose Throat Head and Neck Surgery, Microbiology, Public Health Sciences and Psychometry.

Department of Pulmonary and Respiratory Medicine, Ear Nose Throat Head and Neck Surgery, and Microbiology to see the feasibility or relevance of the test content from the clinical and laboratory aspects of Covid-19. Public Health Sciences Section specializing in Occupational Health and Safety (K3) to assess promotive and preventive aspects in the hospital environment. Psychometric Section to assess the aspects of instrument development.

The expert panel was given consent forms to participate in the research, research questionnaires, questionnaire blueprints and questionnaire eligibility check sheets. The content validity test was carried out in the following steps: 1) submitting the questionnaire design to a panel of experts; 2) receive back the revised results and the





opinion of the expert panel; 3) analyze and improve the results of expert validation; 4) Validation for the second round until the results of all questions and statements in the questionnaire are declared valid.

In the first round of content validation, addition of the number of items and changes in the sentence items was carried out so that the developed questionnaire corresponds to aspects of knowledge, attitudes, and actions. In the validity of the first round, 7 items were added and language was corrected. the results of the first round of content validation process quantitatively obtained a CVI of 0.761 which can be seen in Table 1.

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Amount of Approval	CVI
<b>Knowledge</b>							
Item 1	1	1	1	1	1	5/5	1,00
Item 2	0	1	1	0	0	2/5	0,40
Item 3	1	1	1	1	1	5/5	1,00
Item 4	0	1	1	0	0	2/5	0,40
Item 5	0	1	1	1	1	4/5	0,80
Item 6	1	1	1	0	1	4/5	0,80
Item 7	1	1	1	1	1	5/5	1,00
<b>Attitude</b>							
Item 1	1	0	1	1	1	4/5	0,80
Item 2	0	0	1	0	1	2/5	0,40
Item 3	1	1	1	1	1	5/5	1,00
Item 4	0	1	1	0	0	2/5	0,40
Item 5	1	0	1	1	1	4/5	0,80
Item 6	0	1	1	1	1	4/5	0,80
Item 7	0	1	1	1	1	4/5	0,80
<b>Action</b>							
Item 1	0	1	1	1	1	4/5	0,80
Item 2	1	1	1	1	1	5/5	1,00
Item 3	0	1	0	1	1	3/5	0,60
Item 4	0	1	1	0	1	3/5	0,60
Item 5	0	1	1	1	1	4/5	0,80
Item 6	0	1	1	1	1	4/5	0,80
Item 7	0	1	1	1	1	4/5	0,80
Item 8	1	1	0	1	1	4/5	0,80
Item 9	1	1	1	1	1	5/5	1,00
Item 10	0	1	0	1	1	3/5	0,60
Item 11	0	1	1	1	1	4/5	0,80
Item 12	0	1	1	1	1	4/5	0,80
Sum	10	23	23	20	23	Mean CVI	<b>0,761</b>
Relevant proportions	0,385	0,885	0,885	0,769	0,885		

Table 1. Results of Round 1 Content Validation By Expert Panel.

The content validation process was carried out as many as two rounds until the entire expert panel considered that all items had been able to measure Covid-19 prevention behavior in clinical clerkship students. In the second round of the validity test, 4 questions were added to the knowledge section, 1 statement to the attitude section,

and 2 questions to the action section according to the input in the first round validity. In the second round of content validation, a CVI of 1.00 was obtained seen in table 2.

Items	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Amount agreement	CVI
<b>Knowledge</b>							
Item 1	1	1	1	1	1	5/5	1,00
Item 2	1	1	1	1	1	5/5	1,00
Item 3	1	1	1	1	1	5/5	1,00
Item 4	1	1	1	1	1	5/5	1,00
Item 5	1	1	1	1	1	5/5	1,00
Item 6	1	1	1	1	1	5/5	1,00
Item 7	1	1	1	1	1	5/5	1,00
Item 8	1	1	1	1	1	5/5	1,00
Item 9	1	1	1	1	1	5/5	1,00
Item 10	1	1	1	1	1	5/5	1,00
Item 11	1	1	1	1	1	5/5	1,00
<b>Attitude</b>							
Item 1	1	1	1	1	1	5/5	1,00
Item 2	1	1	1	1	1	5/5	1,00
Item 3	1	1	1	1	1	5/5	1,00
Item 4	1	1	1	1	1	5/5	1,00
Item 5	1	1	1	1	1	5/5	1,00
Item 6	1	1	1	1	1	5/5	1,00
Item 7	1	1	1	1	1	5/5	1,00
Item 8	1	1	1	1	1	5/5	1,00
<b>Action</b>							
Item 1	1	1	1	1	1	5/5	1,00
Item 2	1	1	1	1	1	5/5	1,00
Item 3	1	1	1	1	1	5/5	1,00
Item 4	1	1	1	1	1	5/5	1,00
Item 5	1	1	1	1	1	5/5	1,00
Item 6	1	1	1	1	1	5/5	1,00
Item 7	1	1	1	1	1	5/5	1,00
Item 8	1	1	1	1	1	5/5	1,00
Item 9	1	1	1	1	1	5/5	1,00
Item 10	1	1	1	1	1	5/5	1,00
Item 11	1	1	1	1	1	5/5	1,00
Item 12	1	1	1	1	1	5/5	1,00
Item 13	1	1	1	1	1	5/5	1,00
Item 14	1	1	1	1	1	5/5	1,00
Amount	33	33	33	33	33	Means CVI	<b>1,0</b>
Proportion relevant	1,00	1,00	1,00	1,00	1,00		<b>0</b>

Table 2. Results of Round 2 Content Validation by Expert Panel.

## RESULTS AND DISCUSSION

Validation process content next with comprehension test language is performed in two ways , viz with a panel of experts and test respondents. Understanding test Language to a panel of experts aim For ensure choice of words used Already in accordance For disclose meaning from every question done together with expert judgment . Understanding test Language to test respondents conducted use completed questionnaire declared valid by the expert





panel conducted to 3 students secretariat clinic active in station clerkship. On comprehension test language, expert panels and test respondents all together requested evaluate appropriateness view and layout ( layout ) of known questionnaire with validity test face ( face validity ).

Understanding test language on rounds First to test respondents produce respondent understand and all word choice or language used for compile questions in questionnaire stated can represent intended meaning in questionnaire. Final result validation content with two rounds and a comprehension test language produce 33 valid question items.

In procedure construction or drafting instrument should do procedure item analysis with method test characteristics of each item or known with testing Power different items. on analysis Power different items done with Pearson's product moment method. The more tall coefficient correlation positive between score items with score test means the more high consistency between the items are meaningful the more tall Power the difference and direct can increase its reliability. The ideal power difference is obtained when coefficient correlation aitem -total (  $r_{ix}$  ) is close number 1. In general Power different considered satisfying Can reach number 0.3. However , if the number of items is not sufficient from the desired amount , then researcher can consider For lower limitation criteria become  $r_{ix} \geq 0.25$ . 14 From the results analysis Power different items, all the items in the questionnaire this said own Power different good items that can be seen in table 3.

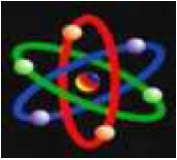
Knowledge		Attitude		Action	
Items	$r_{ix}$	Items	$r_{ix}$	Items	$r_{ix}$
1	0.659	1	0.298	1	0.535
2	0.387	2	0.274	2	0.710
3	0.423	3	0.622	3	0.549
4	0.553	4	0.589	4	0.587
5	0.388	5	0.473	5	0.591
6	0.488	6	0.533	6	0.505
7	0.276	7	0.376	7	0.493
8	0.542	8	0.663	8	0.503
9	0.452			9	0.522
10	0.388			10	0.603
11	0.335			11	0.614
				12	0.337
				13	0.448
				14	0.536

Table 3. Coefficient Value Correlation Pearson's *Product-Moment* Between the Distribution of Each Item's Scores and the Total Test Scores

The alpha coefficient formula ( $\alpha$ ) for polytomous data , namely in the attitudes and actions section. In the KR-21 knowledge section, the value obtained is 0.888 so that the reliability can be assessed as good. Reliability test on the attitude and action section using the alpha coefficient formula evaluation method on the attitude section obtained a reliability value of 0.682. Reliability test on the action section obtained results with the value of the alpha coefficient formula , namely 0.8816 so that it can be assessed that the reliability of attitudes and actions is good.

At the start making questionnaire , review literature done For determine aspects to be rated. review literature done on several journals and guides prevention of Covid-19 by WHO, CDC, and the Ministry of Health of the Republic of Indonesia is reviewed and analyzed For made quantitative content. 15 Method of preparation This in accordance with that carried out by Park (2021) in research development and validation questionnaire knowledge, attitudes, and actions of Covid-19 to student nursing in the United States. 15 Writer compile question into 3





parts that is knowledge, attitude, and action. Explanation each part customized with 6 steps prevention of Covid-19 according to government. Final result from review literature, a total of 26 items were generated. For questionnaire later start arranged in one print blue (blueprint) or specification table. 16 Completed questionnaire developed later can utilized as instrument. For evaluate consisting behavior from part knowledge, attitudes, and actions prevention of Covid-19 in students secretariat arrived clinic moment. This Not yet need Once done in Indonesia.

Print blue (blueprint) that has been finished arranged. Then shipped to 5 experts from Pulmonary and Medicine Respiration, Ears Nose Throat Surgery Head and Neck, Microbiology, Public Health Sciences and Psychometry. Amount expert used for validation content in accordance with statement Sugiyono said that validation content can done with a minimum of 3 validators. 12 In line with research by Winata et al (2021) involving 3 expert panels. For become reviewer for develop questionnaire "Pelita Harapan" for evaluate knowledge, attitudes, and actions of Covid-19 in society young in Indonesia. 17 Different with research by Park (2021) involving a panel of 10 experts. For become inside reviewer develop questionnaire knowledge, attitudes, and Covid-19 actions performed on nursing students.

Validation process content do two rounds until whole expert consider all questionnaire items has can measure knowledge, attitudes, and prevention of Covid-19 in students secretariat clinic profession doctor. this process in line with

research conducted by Catharina et al (2019) which developed questionnaire. For measure use of the internet and social media in service pharmacy does validation content as much as 2 rounds. 19 This along with research conducted by Winata et al (2021) which conducted 2 rounds in do content validation. Under development test as instrument, item based selection Power item discrimination is one technique to use increase reliability score test.

The results of the reliability test show value. In part acquired KR-21 knowledge worth 0.888 so can rated very good reliability. this in line with research conducted by Winata et al (2021) which developed questionnaire behavior prevention of Covid-19 in the community youth in Indonesia get reliability part knowledge of 0.87. 17 These results are also consistent with study Verot et al (2022) who developed questionnaire knowledge and action prevention of Covid-19 in the population in France show that mark reliability from aspect knowledge of Covid-19 of 0.83.

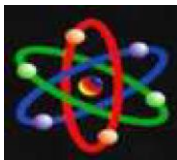
## CONCLUSION

A Covid-19 prevention questionnaire was obtained for clinical clerkship students at the Faculty of Medicine, Andalas University with 33 valid and reliable questions to assess Covid-19 prevention behavior for clinical clerkship students in terms of knowledge, attitudes and precautions for Covid-19.

## THANK-YOU NOTE

Thank you researchers convey to all participating parties help in finish and perfect study this.



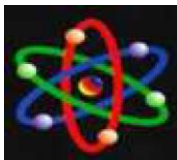


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## BIBLIOGRAPHY

- Ministry of Health of the Republic of Indonesia. Questions and Answers Regarding COVID-19 Ministry of Health . 2020.:  
<https://www.kemkes.go.id/article/view/20030400008/FAQ-Coronavirus.html> - Accessed June 2021
- Ministry of Health of the Republic of Indonesia. (2021) Current situation on the development of the novel coronavirus (Covid-19).  
<https://infinemerging.kemkes.go.id> - Accessed June 20213.
- Bongomin F, Olum R, Nakiyingi L, Lalitha R, Ssinabulya I, Sekaggya-Wiltshire C, et al. Internal medicine clerkship amidst COVID-19 pandemic: A cross-sectional study of the clinical learning experience of undergraduate medical students at Makerere university, Uganda. *Adv Med Educ Practice*. 2021;12:253–62.
- Kim SM, Park SG, Jee YK, Song IH. Perception and attitudes of medical students on clinical clerkship in the era of the Coronavirus Disease 2019 pandemic. *Med Educ Online* . 2020;25(1).
- Anugrahsari S. The perspective of clinical clerkship students on health protocols during the covid-19 pandemic on daily exercise activities. 2021;194–206.
- Driposwana Putra I, Malfasari E, Yanti N, Erlin F, Hasana U, Harahap AS, et al. Compliance Level of Health Students in Health Protocols After More Than One Year During the Covid-19 Pandemic. *J Mental Nursing Persat Indonesian National Nurse* 2021;9(2):429–34.
- Triwibowo C. Introduction to the basic science of public health. Yogyakarta: Nuha Medika; 2015.
- Sondakh JJS, Warastuti W, Susatia B, Wildan M, Sunindya BR, Budiyanto MAK, et al. Indonesian medical students' knowledge, attitudes, and practices toward COVID-19. *Heliyon*. 2022;8(1):e08686.
- Apriningsih H, Prabowo NA, Myrtha R, Gautama CS, Wardani MM. Prevention of covid-19 transmission to health workers at the March eleven university hospital. *J Ilm Servants to the Community*. 2020;4(2):556–64.
- Ayinde OO, Usman AB, Posi A, Gbolahan A. A Cross-Sectional Study on Oyo State Health Care Worker's Knowledge, Attitude and Practice regarding Corona Virus Disease 2019 (COVID-19). *Adv Infect Dis*. 2020;10(03):6–15.
- Mendoza Millán DL, Carrión-Nessi FS, Mejía Bernard MD, Marcano-Rojas MV, Omaña Ávila ÓD, Doval Fernández JM, et al. Knowledge,





- Attitudes, and Practices Regarding COVID-19 Among Healthcare Workers in Venezuela: An Online Cross-Sectional Survey. *Front Public Heal.* 2021;9(July):1–10.
- Sugiyono. Quantitative qualitative research methods and R&D. Bandung: Alfabeta; 2013. 121 p.
- Gay, LR, Mills, GE, & Airasian PW. Educational research: Competencies for analysis and applications (9th edition). Upper Saddle River, New Jersey: Prentice Hall; 2009.
- Azwar S. Reliability and validity 4th edition. Yogyakarta: Student Library; 2012 p.m.
- Park DI. Development and validation of a knowledge, attitudes and practices questionnaire on covid-19 (Kap covid-19). *Int J Environ Res Public Health.* 2021;18(14).
- Oktavia R, Irwandi I, Rajibussalim T, Mentari M, Mulia IS. Assessing the validity and reliability of questionnaires on the implementation of the Indonesian curriculum K-13 in STEM education. *J Phys Conf Ser.* 2018;1088.
- Winata S, Kurniawan A, Agung FH, Hardjo Lugito NP, Jodhinata C, Halim DA, et al. Development and Validation of a “Pelita Harapan” Questionnaire Assessing Knowledge, Attitude, and Practice Toward Coronavirus Disease 2019 Among Young People in Indonesia. *Medicus.* 2021;8(3):117.
- Karuniawati H, Yulianti T, Dewi LM, Maulida WA, Laela N, Ayu SMK. Development and psychometric testing of knowledge, attitude, and practice on the covid-19 outbreak questionnaire (kapcovq) for the general community. *Int J Appl Pharm.* 2021;13(Special issue 4):100–5.
- Heryanto CAW, Korangbuku CSF, Djeen MIA, Widayati A. Questionnaire Development and Validation to Measure Internet and Social Media Use in Pharmaceutical Services. *Indones J Clin Pharm.* 2019;8(3).
- Saefi M, Fauzi A, Kristiana E, Adi WC, Muchson M, Setiawan ME, et al. Survey data of COVID-19-related knowledge, attitudes, and practices among Indonesian undergraduate students. 2020;31:105855.
- Hendryadi H. Content validity: early stages of questionnaire development. *J Ris Manaj and UNIAT Faculty of Economics Business.* 2017;2(2):169–78.
- Rodrigues IB, Adachi JD, Beattie KA, MacDermid JC. Development and validation of a new tool to measure the facilitators, barriers and preferences for exercise in people with osteoporosis. *BMC Musculoskeletal Disorder.* 2017;18(1):1–9.
- Azwar S. The effect of item selection based on discriminatory power on the reliability of test scores. *Psychological Bull.* 2009;17:28–32.
- Verot E, Bonjean P, Chaux R, Gagnaire J, Gagneux-Brunon A, Pozzetto B, et al. Development and Validation of the COVID-19 Knowledges and







Behavior Questionnaire in a French Population (CoVQuest-CC). *Int J Environ Res Public Health*. 2021;1.

Agarwal A, Ranjan P, Saraswat A, Kasi K, Bharadiya V, Vikram N, et al. Are health care workers following preventive practices in the COVID-19 pandemic properly? - A cross-sectional survey from India. *Diabetes Metab Syndr Clin Res Rev*. 2021;15(1):69–75

