WILL I SURVIVE? THE ROLE OF PERCEIVED RISK AND KNOWLEDGE TOWARD HOPE IN THE TIME OF PANDEMIC: STUDY ON INDONESIAN STUDENTS

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Abstract

Purpose of the study: The purpose of this study was to examine participant's hopes whether the pandemic will end based on the perception of risk concerning vulnerability, severity, and anxiety as well as their knowledge about the pandemic among university students in Indonesia.

Methodology: 431 (20 % male and 80 % female; Age mean = 19.98; SD = 1.421) undergraduate students in psychology were recruited from across university in Indonesia. A battery scale consists of three questionnaires evaluating perceived risk, knowledge, and hope were administered using the online survey. A multiple regression analysis was applied to examine the hypotheses.

Main Findings: The results demonstrated that perceived risk and knowledge emerge as significant predictors of hope. The results also showed that there was a negative relationship between the dimension of perceived risk and hope. There was no significant correlation between health knowledge and hope. The results indicated a statistically significant model of regression. However, this study revealed that there was no statistically significant difference between health knowledge and hope.

Applications of this study: The psychological aspect of risk perception and knowledge could be acknowledged as important variables to enhance the hope of university students to face this pandemic.

Novelty/Originality of this study: The study offers a further explanation about the scope of earlier research in the field of hope in pandemic -19. It also provides a new research paradigm to the area of perceived risk by introducing understudied individual factors, such as knowledge associated with the hope of facing the pandemic among college students.

Keywords: Covid-19, Perceived Risk, Hope, Knowledge, Vulnerability, Severity, Anxiety, College Students.

INTRODUCTION

After the first breakout of a novel coronavirus (-19) in Wuhan, China, at the end of 2019, the Virus rapidly spread worldwide. While many countries experienced a first pandemic wave at the end of 2019, Indonesia was initially affected by imported cases followed by an acceleration of cases mainly due to travellers in March 2020. The government begins to pay more serious attention to the Virus once the first two patients were confirmed and officially announced by Indonesia's president, Joko Widodo, in a press conference on March, 2nd 2020.

The pandemic not only carries the risk of death from a viral infection but also does have psychological pressure on people in China and the rest of the world (Duan & Zhu, 2020). In Indonesia, the announcement of the first case in early March is likely to lead a severe pressure on all levels of society. The spread of the Virus forces local authorities to implement strict social isolation and to regulate lock-down across social facilities (schools, worship places, and universities). The ministry of education develops an alternative method of learning so the students can learn from their homes. The program is known as "*Belajar di Rumah*" (school from home) and has been initiated throughout the country. Aside from being its educational purpose, the program was expected to maintain a student's mental health during the social quarantine.

There are emerging studies about the psychological impact of the epidemic across population groups, e.g., -19 patients, medical staff, children, and older adults (Q. Chen et al., 2020); (Li et al., 2020); (Yang et al., 2020). However, there has been little attention to the mental health study focusing on students during the pandemic (Cao et al., 2020), in particular to the Indonesian student facing the negative impact of the pandemic.

There are individual differences in reacting to threats of the pandemic. Reactions can range from fear to ignorance (Wheaton et al., 2012). At the end of the spectrum, some people ignore or deny that the risks are real, and fail to engage in recommended health behaviors such as hygiene practices and social distance. Many people react with intense anxiety or fear. A moderate level of fear or anxiety can motivate people to overcome health threats, but severe stress can be debilitating (Taylor, 2019).

It is essential to understand how people managed their future goals once the pandemic of -19 is over. Knowing when the pandemic is over would likely enhance their psychological well-being. Several questions immediately come to mind when such an assumption is put forward. For example, individuals begin to articulate their future after the -19 Pandemic

ends; how far into the future does this articulation extend; what are the important and essential aspects of this future after -19 Pandemic.

People are more comfortable and mentally well if they are in a predictable situation. As consequence, people would always tend to predict what will happen in the future. This prediction may lead them to different routes of life scenarios, whether they are leading to favorable or unfavorable life outcomes. People's expectation of favorable life outcomes is known as hope. Hope to define as the perceived ability to get the path to the desired goal, and motivate yourself through the agency thinking to use that pathway ([Snyder, 2002](#)). Hope is not emotions but dynamic cognitive, motivational systems ([Snyder et al., 1991](#)). In this sense, emotions follow the cognition in the process of pursuing goals ([Snyder, 2002](#)). Expectations can be measured in a cross-situational condition that correlates positively with self-esteem, perceived problem-solving abilities, perception of control, optimism, positive effectiveness, and positive outcome expectations ([Snyder et al., 1991](#)).

Differences in behavioral responses to health among students occur because of an individual's ability to identify factors that influence health outcomes and compliance in treatment (Kalichman et al., 2008) This has also been linked to the inability to achieve suppression from the spread of viruses, such as HIV ([Jones et al., 2013](#)) ; ([Ownby et al., 2013](#)). This factor, commonly called health literacy, depends on how humans perceive these risks to health. Health literacy also influences how they see that health or health problems through the perception of risk they receive. Risk perception is a subjective assessment that has been carried out by people about the characteristics and severity of risks. This concept is most commonly used to refer to natural hazards and threats to the environment or health, such as nuclear power. Risk perception often targets in health behavior change interventions, and recent meta-analytic evidence suggests that successful interventions that involve and change risk perceptions result in further improvements in health behavior ([Ferrer & Klein, 2015](#)). Risk perception can be minimized or even appropriately managed if the individual has a high health literacy. Health literacy defines as "the extent to which individuals can obtain, process, and understand basic health information and services needed to make the right health decisions" ([Bish et al., 2011](#); [Selden et al., 2000](#)).

By investigating the perceptions of risks that can affect health knowledge, this current research could expand the research scope on health behavior. Specifically in handling the spread of viruses, and support health knowledge and risk perception variables on the spread of coronaviruses, and increase understanding of the importance of healthy living for college students.

LITERATURE REVIEW

Hope

[Snyder et al., \(1991\)](#) indicate that the expectations have surpassed wishful thinking into an understanding of how deliberate thinking leads to adaptive action ([Snyder et al., 1991](#)) They identified hope as the human capacity to; (a) conceptualize their goals in a more precise way (goal thinking), (b) develop strategies to achieve these goals (pathways thinking), and (c) initiate and maintain motivation for using the respective strategy (agency thinking). Everyone may have the ability to think purposively, but it is often not intentional. Agency pathways and thinking are both needed for embracing hope; however, they are not sufficient to sustain a successful pursuit of goals. Thus, agency pathways and thought are additive, reciprocal, and positively related, although they are not identical ([Snyder et al., 1991](#)). Both of these components need hopeful thinking. Hope reflects the relatively enduring cross-situational subjective judgments of abilities related to goals ([Snyder, 2002](#)).

Hope theory stated that hope is individuals' pathways and agency thinking, which relatively stable across time and targets. [Snyder \(2002\)](#) states that people carry their broad set of dispositions regarding expectations for the pursuit of their individual goals. Hope variables predict many important positive outcomes, from physical and mental health to academic and athletic success ([Snyder, 2002](#)). Research has shown that child's hopeful thinking is positively related to perceived competence and self-esteem ([Marques et al., 2009](#)) and negatively associated with depressive symptoms ([Snyder et al., 1991](#)). People with higher hope are likely to succeed in pursuing their goals. They also have a higher chance to experience more positive emotions. On the contrary, people with a lower level of hope tend to have more challenge overcoming adversity and, therefore, might prone to more negative emotions ([Lopez et al., 2004](#)) ([Snyder, 2002](#)). Further, children and adolescents who report higher levels of hope also seen themselves more favorably and have a slightly positive self-referential image.

Previous studies have evidence showing that hope is related to one's life satisfaction and well-being ([Gilman et al., 2006](#)). In a similar study, ([Marques et al., 2009](#)) found that hope significantly and positively correlated with global life satisfaction and mental health for high school students. Higher levels of hope are also related to scholastic and social competencies ([Onwuegbuzie & Daley, 1999](#)). Recent studies provide preliminary evidence for the efficacy of growing hope in different samples. As an example, adults who had previously completed a psychological intervention designed to increase hopeful thinking and increasing activity pursuit of goals are significantly having a higher level of hopes, goals in life, and self-esteem, as well as less symptoms of depression and anxiety ([Cheavens et al., 2007](#)). Based on the above explanations, hope could be summarised that that, as a strength, it would potentially help individual mental health from the adverse effects of unfavorable life events.

Perceived Risk

Risk perceptions are may not solely define in the form of numeric information. Perceived risk needs to describe in a way people perceived their personal experiences on potential threats. For example, enforcement of preventive behavior results in a subsequent reduction of appropriate risk perception ([Brewer et al., 2004](#)), and engaging in risky behaviors is associated with appropriately higher risk perceptions ([Mills et al., 2008](#)). Moreover, risk perceptions are influenced by the information that we consider most important ([Kahneman, 1973](#)). For example, individuals would have a higher perceived risk of being infected by the disease when someone in their family diagnosed with the disease ([L. S. Chen & Kaphingst, 2011](#)). Although factors like family history might provide some relevant information about actual susceptibility to disease, other important information also plays a role in risk perception. For example, risk perceptions are often influenced by the frequency of a threat represented in media exposure ([Slovic, 1987](#)).

Contextual factors also influence risk perceptions. For example, as threats become more immediate, risk perceptions tend to become more pessimistic ([Shepperd et al., 2000](#)). Risk perceptions also tend to be higher when a health threat is difficult to control ([Slovic, 1987](#)). Moreover, effective contextual factors play a critical role; individuals that were experiencing anger tend to have more optimistic risk perceptions, whereas those who are experiencing fear tend to have more pessimistic risk perceptions ([Lerner & Keltner, 2000](#)). General emotions can also influence the formation of risk perceptions. For example, distress is associated with higher risk perceptions ([Mathur & Levy, 2013](#)), and depressed individuals may be more likely to adjust their risk perception estimates in response to health information than non-depressed individuals ([Keller et al., 2002](#)). These tendencies have important implications for the formation of risk perceptions in a health context, particularly given that many health threats and clinical care contexts evoke strong emotions ([Ferrer & Klein, 2015](#)).

Health Knowledge

Health knowledge is a personal understanding of a particular health-related issue. A patient's knowledge about their specific health condition is vital in disease management. It is associated with positive health responses, such as in the medication and treatment adherence, the decision-making process, and might lead to better health outcomes ([Grueninger, 1995](#)). Studies have shown that patient with a chronic disease is likely to have lower knowledge of their condition ([Barr et al., 2009](#); [Volk et al., 2013](#)). A previous study had identified reasons for disagreement on treatment between patients and providers showed that interventions that increase patients' knowledge of their disease might increase patient compliance regarding disease management ([Hansen et al., 2015](#)).

Research related to the spread of viruses and health knowledge has been conducted for research on HIV. HIV referred health knowledge is defined as having HIV-related information that would help with being aware of HIV risk behaviors, making informed decisions, and making behavioral changes if necessary ([Carey & .E.E. Schroder, 2002](#)). Having a good health-related quality of life, adequate knowledge and understanding about disease conditions and how vulnerable one might be to these conditions is necessary, as this might lead to the behavioral changes required to achieve a healthy lifestyle of prevention and control of one's disease condition ([Q. Wang et al., 2014](#)). Although health knowledge is important, it alone is not sufficient to bring about behavioral change ([Q. Wang et al., 2014](#)).

Relationships between Variable

Researchers have identified the number of psychological factors that are positively associated with hope such as perceived risk and health knowledge/literacy. Hope is a crucial factor in the dynamic of living at risk. Psychological responses such as fear, fatalism, and misperception about the disease have been identified as personal factors that inhibit participation in cancer health promotion behaviors ([Cardwell et al., 1993](#)). Other studies in the field of breast cancer specifically identify the lack of knowledge about breast cancer as a significant obstacle to doing healthy behavior. Other factors, such as confidence in the efficacy of disease prevention behavior, perceived threats and feelings of personal vulnerability, and methods of communicating cancer information, have also been cited as factors that influence health promotion behavior ([Denniston, 1981](#)).

The health belief model (HBM) should be used to explain people's behavior in responding to disease. ([Rosenstock et al., 1994](#)) developed this model and implemented preventive efforts related to health. HBM is one of the psychological approaches most often used to explain health-related behavior. Three essential factors in the Health Belief Model, are 1) Individual readiness to change behavior in avoiding a disease or minimize health risks. 2) There is a push in the individual environment that makes him change behavior.

Perceived risk, according to the health belief model, explains that perceived severity is a belief that a person has in connection with a feeling of the seriousness of a disease that can affect his current state of health. Someone evaluates how big the consequences arising from the disease, both medical outcomes such as death or disability and social impacts such as effects on work and life. It is important to take into account emotional and financial factors when considering the seriousness of the disease. The more consequences that are believed to occur as a result of the behavior of health risks to them, the higher the perception that the problem is a threat so that they will take action.

Perceived vulnerability is the perception of a perceived threat or vulnerability to the risks that will arise from the disease. Individuals vary in assessing these possibilities even though their health conditions are the same. The higher the

perceived vulnerability, the greater the perceived threat, and the higher the likelihood of individuals to take action to overcome problems that might arise (Sarafino, 2008). individuals often ignore the possibility of themselves about threats to their illness, so it is not uncommon for individuals not to take action to overcome health problems that threaten them.

During the -19 pandemic, normal life patterns suddenly had to be changed immediately, and some people were confused about what, how, and should to do. Life pattern changes cause anxiety. Within normal limits, anxiety is a sign that is needed by individuals for a danger that is expecting to be better prepared. All of these things are creating a lot of concern for people leading to heightened levels of anxiety. Pandemics can lead to elevated levels of stress; Anxiety is a typical response to any stressful situation.

Each reaction contributed to the -19 Virus as a global event of anxiety through intensifying and amplifying the sense of urgency in the face of this new infectious disease. Many people have started to use health procedures in handling protection from viruses regularly, but some others still do not care about these procedures. Reaction to pandemics may vary related to the health concern of each person. Health concerns and anxiety associated with epidemics/pandemics can have a significant psychological impact (e.g., stress, negative intrusive thoughts, avoidance), can be related to ineffective preventive behavior. That have adverse longer-term consequences such as persistent pessimism (C. Wang et al., 2020).

Hope theory must be suitable for use in the context of this study. Even so, high expectations do not always mean someone will engage in behaviors that improve health behaviors. This behavior must be adopted as a goal. One way to measure whether people adopt goals is to ask about the personal interests of those goals. According to Hope Theory (Snyder, 2002), when people consider an important goal, expectations must predict success in achieving that goal. In this study, we assess the perceived importance of various health promotion goals (eg to eat healthy foods, to exercise more). The level of hope must interact with the importance level for predict health-related behavior, with individuals of higher hope achieving important personal goals more easily than individuals of lower hope.

The authors investigated whether the perceived risk is associated with adolescence' decision-making in health behaviours. In the current paper, perceived life chance was chosen for two reasons, 1) earlier studies indicating that the "nothing to lose" attitudes were contributing to high-risk healthy behaviours among adolescents. However, those studies did not inform whether the regular, everyday health-related behaviours associated with the risk-healthy behaviour. 2) The socio-economic context may associate with the variance of the perceived risk level. Social-demographic variables, such as income, education background, and occupation are used to identified one's social position in the society (Lynch & Kaplan, 2000). Measures of perceived life changes provide the researcher's chance to understand this phenomenon as experienced by the individual. This measure also provides a piece of information if the evaluation of subjective expectation for the future is motivational about health behaviours. This assumption builds upon earlier studies about factors that are associated with adolescences' future expectations.(Dominitz et al., 2001; Fischhoff et al., 2000).

METHODOLOGY

Participant

The researchers were collecting the data using an online survey. Four hundred thirty-one psychology college students across the university in Indonesia have participated in the study. The sample characteristic was female (79.5%). With an average age of 20.79 (SD = 2.28).

Measures

Question-wording means, and standard deviations are presented in Table 1. All variables were measured using Likert-type scales. The authors used the hope instruments (Bults et al., 2011) that were previously used for the study about the N1h1influenza virus.

Perceived risk

Perceived risk scale was used to measure participant's perception of risk (Bults et al., 2011) this scale consists of eight items covering three dimensions of risk; the first three items aim to measure perceived severity (Chronbach alpha 0.8), and another three items for measure vulnerability (Crombach alpha 0.6), and the last two items for perceived anxiety (Cronbach alpha 0.8).

Knowledge of Health

Most studies on health knowledge are disease-specific, and measurement tools are usually questionnaires specific to the purpose of the survey or the study population. Most researchers would use questionnaires related to their area of research that has already been published and validated. If none exists, reliability and validity testing can use with new questionnaires and scales (Artino et al., 2014; Edwards, 2010). Therefore, the knowledge about the pandemic was measured using five items taken from the health knowledge general survey (Bults et al., 2011).

Hope

Hope was measured using two items ("Dari data yang ada maka akan terjadi penurunan penularan; "Kami dapat kembali hidup normal tanpa takut dalam waktu). The answer based on respondent's range of time (1 = less than 1

month; 2 ; 1 – 3 month; 3= 3- 6 month; 4 = 6 – 12 month; 5= more than 1 years). The maximum score for knowledge is five, and it is classified into two categories with high knowledge scores above mean and low knowledge scores below mean. Hope scale assesses pathways and agencies regarding goals in general. Hope has been found to strongly predicted academic performance, athletic performance, depression, anxiety, and meaning in life (Snyder et al., 2002). The previous study has shown excellent retest reliability for the Hope Scale for dispositional construct (Snyder et al., 1991).

Table 1: Questionnaire Items, Means, and Standard Deviations.

Variable and Questionnaire Items	Mean	SD
Hope	3.1647	.85495
<i>Dari data yang ada maka akan terjadi penurunan penularan.</i> From the available data, there will be a decrease in transmission		
<i>Kami dapat kembali hidup normal tanpa takut dalam waktu</i> We can return to normal life without fear		
Perceived vulnerable	2.2591	.88230
<i>Saya mungkin menjadi ODP (Orang Dalam Pantauan) -19 (1 = sangat tidak rentan, dan 5 = sangat rentan)</i> I might be a Person in Monitoring for -19 (1 = not very vulnerable, and 5 = very vulnerable)		
<i>Saya mungkin akan terjangkit -19 (1 = sangat tidak rentan, dan 5 = sangat rentan)</i> I might get -19 (1 = not very vulnerable, and 5 = very vulnerable)		
<i>Saya lebih mungkin akan terjangkit dibandingkan orang lain (1 = sangat tidak rentan, dan 5 = sangat rentan)</i> I am more likely to be infected than other people (1 = not very vulnerable, and 5 = very vulnerable)		
Perceived severity	4.0147	.58847
<i>Penyebaran wabah -19 (1 = sangat tidak parah, dan 5 = sangat parah)</i> Spread of -19 epidemic (1 = not very severe, and 5 = very severe)		
<i>Kemungkinan akan terjangkit -19 (1 = sangat tidak parah, dan 5 = sangat parah)</i> It is likely to be infected with -19 (1 = not very severe, and 5 = very severe)		
<i>Dampak -19 terhadap kesehatan (1 = sangat tidak parah, dan 5 = sangat parah)</i> Impact of -19 on health (1 = not very severe, and 5 = very severe)		
Perceived anxiety	3.2831	.73764
<i>wabah -19 menyebar dengan cepat (1 = sangat tidak cemas, dan 5 = sangat cemas)</i> -19 outbreaks spread rapidly (1 = very anxiety, and 5 = very anxiety)		
<i>saya merasa akan terjangkit -19 (1 = sangat tidak cemas, dan 5 = sangat cemas)</i> I feel I will get -19 (1 = very uneasy, and 5 = very anxious)		
Knowledge	3.8190	.80389
<i>Wabah -19 ini disebabkan oleh varian baru virus influenza Ya= 1/ Tidak = 0*</i> The -19 outbreak was caused by a new variant of the influenza virus Yes = 1 / No = 0		
<i>Telah tersedia vaksin yang efektif untuk mengobati -19 Ya= 0/ Tidak = 1*</i> An effective vaccine is available to cure -19 Yes = 0 / No = 1		
<i>Virus -19 dapat ditularkan antar manusia Ya= 1/ Tidak = 0*</i> The -19 Virus can be transmitted between humans Yes = 1 / No = 0		
<i>Virus -19 telah menelan banyak korban jiwa Ya= 1/ Tidak = 0*</i> The -19 Virus has claimed many lives Yes = 1 / No = 0		
<i>Virus -19 dapat menular ketika seseorang memakan kelelawar/tikus Ya= 0/ Tidak = 1*</i> -19 virus can be transmitted when someone eats bats/rats. Yes = 0 / No = 1		

*Italics for Indonesia language

Statistical Analysis

This study employed three statistical analyses. First, we computed descriptive statistics for all variables. In the second analysis, a correlation matrix using Pearson's product-moment coefficient was presented. In the third analysis, a multiple regression analysis aims to examine the contribution of perceived risk and knowledge on hope was provided. Result of descriptive analysis shows female students have a higher level of hope (M = 79.35; SD = 7.48) and perceived risk (M = 51.27; SD = 5.03) compared to male students hope (M = 71.40; SD = 10.51) and perceived risk (M = 43.49, SD = 4.88). Both genders showed a medium-low level of Knowledge (female: M = 24.20, SD = 3.41; male: M = 23.63, SD = 4.52) (see Table II).

Table 2: Mean and Standard Deviation by gender

Measures	Gender	N	Mean	Standard Deviation
Hope	Female	343	3.1968	.85150
	male	88	3.0398	.86177
Knowledge	Female	343	3.8484	.80951
	male	88	3.7114	.80951

Perceived Risk	<i>Perceived severity</i>	male	88	3.7045	.77547
		Female	343	4.0476	.58183
	<i>Perceived Vulnerability</i>	male	88	3.8864	.59989
		Female	343	2.2187	.86994
	<i>Perceived Anxiety</i>	male	88	2.4167	.91706
		Female	343	3.3090	.73298
		male	88	3.1818	.75117

RESULTS AND DISCUSSION

Table 3 below indicates correlations among our key variables. There was a significant negative correlation between hope based on perceived risk and knowledge. While perceived anxiety did not significantly correlate with other independence variables. Most of the correlation coefficients, not more than 0.2 are negatively correlated. Only perceived anxiety that did not sign in the level of sign 0.5, we argue that it is reasonable given that hope to have a negative correlation with knowledge (-0.88), perceived severity (-0.65), and vulnerability(-0.157). Even anxiety has a negative correlation (-.190) but not significant with hope. This result implies that hope and knowledge have a significant correlation with perceived severity and perceived vulnerability correlated at (0,437).

Table 3: Correlation matrix of the primary variable

Variable	Hope	Knowledge	<i>Perceived severity</i>	<i>Perceived Vulnerability</i>	<i>Perceived Anxiety</i>
Hope	1.000	-.088	-.065	-.157	-.190
		.033*	.000*	.001*	.089
Knowledge	-.088	1.000	.069	.041	.056
		.033*	.12.1	.197	.077
Perceived severity	-.065	.069	1.000	.437	.306
		.000	.12.1	.000*	.000*
Perceived Vulnerability	-.157	.041	.437	1.000	.185
		.001*	.197	.000*	.000*
Perceived Anxiety	-.190	.056	.306	.185	1.000
		.077	.000*	.000*	

* Sig. (1-tailed) N=431

As shown in this study results, hope on pandemic was significantly affected by perceived severity, perceived vulnerability, and knowledge. A literature review assessing factors that influence preventive behaviour during pandemic situations highlighted that perceived susceptibility to and severity of the disease as well as believing in the effectiveness of protective measures increased its implementation (Bish et al., 2011).

The relationship between risk perception, hope, and knowledge is the interest to many health researchers. Community members often misinterpret the risks of their health problems (violating the accuracy hypothesis) and correct this misinterpretation seen (due to researchers' trust in behavioral motivation hypotheses) as a way to encourage healthy behavior. As we have shown, this study is completely different and may even have the opposite sign (Weinstein & Nicolich, 1993; Weinstein et al., 1998). In this study, the result will lead researchers to conclude that a high perception of the risk of preventing from -19 and making an explanation for this finding, might suggest that people who feel risky to continue risky behavior in a vain attempt to convince themselves that they are not really at risky.

Table 4: The Anova results of the effect of all independent variables on dependent variables

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.755	4	4.689	6.758	.000 ^b
	Residual	295.549	426	.694		
	Total	314.304	430			

a. Dependent Variable: Hope.

b. Predictors: (Constant), knowledge, perceived severity, Perceived Vulnerable, Perceived anxiety.

As seen in Table 4 above, the significance value of the F test is 0.000 where the significance level is 5% or 0.05, which means that there is a significant association between the overall model consisting knowledge and perceived risk to hope in dealing with pandemics among college students in Indonesia.

Table 5: Regression Model Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.605	.340		13.530	.000
Knowledge	-.081	.050	-.077	-1.623	.105
Perceived anxiety	.068	.063	.059	1.083	.279
Perceived Vulnerable	-.142	.051	-.147	-2.801	.005
Perceived Severity	-.257	.072	-.177	-3.576	.000

a. Dependent Variable: Hope

As seen on the Table 5, the regression equation can be seen as follows: Hope = 4,605 + (-0.81) Knowledge + 0.68 perceived anxiety + (-0.142) perceived vulnerable + (-0.257) Perceived severity (*significant at 0.05). it can be concluded that only perceived vulnerability and perceived severity that have significant influences on the dependent variable (hope).

Further, it can be also seen that are two independent variables have a significant influence on hope. This study also wants to find out the amount of contribution from each independent variable influences hope in a pandemic, then ranks it from the largest to the smallest load. Based on the data in table 2, it can be seen that the sequence of predictors that have contributed to the hope in a pandemic from the largest to the smallest is Perceived vulnerable with a contribution of -14% and perceived severity with a contribution of -17%.

CONCLUSION

The purpose of this study was to examine the risk perception consist of perceived vulnerability, severity, and anxiety to the -19 Virus based on hope and knowledge about health in the pandemic. This study reveals risk perceptions predispose college students to pandemic health knowledge. This study also suggests that perceived risk and knowledge added significantly to the model explaining the variance of hope. In addition, this study's findings may inform students' knowledge so that they might optimize students' college to minimize the risk -19 with health knowledge.

In conclusion, we were able to demonstrate that the hope and knowledge took place when risk perception related to the disease was low, while scepticism and misconceptions about the pandemic and exposure from media how to live healthy to anticipate being infected by the coronavirus were frequent. These findings are in line with surveys of other countries conducted during the pandemic (Bish et al., 2011; Nguyen et al., 2011) Rebuilding trust in recommendations of public health authorities and addressing common misinformation in a pandemic will be a challenge when preparing for a future pandemic. The pre-pandemic development of tailormade information strategies accompanied by surveys to monitor public perception implemented early in the pandemic should be considered for future pandemic preparedness planning and the mitigation of health threats on the college student level.

LIMITATION AND STUDY FORWARD

A number of limitations in this study were identified. First, it may contain topics not related to this study and therefore may have reduced potential biases in our conclusions. Second, our survey results are then weighted to control for possible selection bias. Self-selection bias is another major limitation of online survey research (Witmer et al., 1999). (Thompson et al., 2003) Finally, the sample may not fully cover the entire population characteristic in Indonesia. This sampling problem impedes the ability of researchers to make generalizations about study findings.

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AUTHORS CONTRIBUTION

All authors participated in the planning and designing of the study and the online survey. GG and HM coordinated the research and took overall responsibility for the delivery of the work and data analysis. GIR had responsibility for data collection. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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