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CYBERCHONDRIA: IS IT REALLY RELATED TO LOW SELF-ESTEEM?

Fatma Kusuma Mahanani
Department of Psychology, Faculty of Education
Universitas Negeri Semarang Indonesia
fatma.psi@mail.unnes.ac.id

Imam Shofwan
Departement of Non-Formal Education, Faculty of Education
Universitas Negeri Semarang Indonesia
ishofwan@mail.unnes.ac.id

Aminatun Masruuroh
Departement of Psychology, Faculty of Education
Universitas Negeri Semarang Indonesia
aminatunmasruuroh@students.unnes.ac.in

ABSTRACT:

The Covid-19 pandemic occurs throughout the world, one of which is Indonesia. The situation impacts various sectors of life, both economic, physical, and psychological health. Anxiety about being exposed to coronavirus increases internet access regarding health information. Excessive searching for health information is a tendency to experience cyberchondria. Someone with low self-esteem tends to be more prone to experiencing cyberchondria. Individuals with low self-esteem think that online searching for symptoms health information will be more comfortable psychologically than meeting medical personnel. Of course, the current Covid-19 pandemic has become a reinforcer to avoid direct consultation with medical personnel. The purpose of this study was to determine the effect of low self-esteem on cyberchondria during the Covid-19 pandemic. It was correlational research. The research sample was college students. The data analysis method is a simple regression. In conclusion, there is an effect of low self-esteem on cyberchondria in students during the Covid-19 pandemic.

Keywords— cyberchondria; low self-esteem; college student; online health information; covid-19 pandemic

I. INTRODUCTION (HEADING 1- TNR- 10 BOLD):

The current ongoing global pandemic increases various activities carried out from home. The internet usage is increasing for various activities, especially those related to work and education. Reporting from detik.com, Data from a survey conducted by Indonesian Internet Service Providers Association (APJII; Asosiasi Penyelenggara Jasa Internet Indonesia) in 2018 showed the range of the internet users' age were 15 to 19 with a percentage of 91% becoming the first rank, and it is followed by the user aged 20 to 24 with a percentage of 88.5%. Hence, it can be concluded that most internet users are adolescents and early adults. Alpaslan (2016) said that adolescents and young adults nowadays are assumed to frequently use the internet, which is not only for social communication and entertainment but also for seeking health information. Khazaal et al. (2021) stated that more than 70% of Internet consumers conducted online health-related searches based

on several studies in the USA and Europe. Vismara et al. (2020) summarizes some information regarding national and international surveys reporting that 70% to 80% of internet users use the web for health advice, support and/or in preparation for a medical appointment.

Gathering information via the internet is indeed a typical, practical, and reasonably accessible strategy for everyone. However, when the search is excessive and repetitive, it will become a pathological behavior, namely cyberchondria (Maftei & Holman, 2020). Someone who experiences anxiety regarding a disease and its severity will often access online health information. Doherty-Torstrick, et al., 2016) explain that it is a predictor of the online symptom searching. The explanation is that the increasing time for online gathering information related to symptoms will increase anxiety and functional impairment. Walker, A., et al. (2020) Online searches for information related to specific health symptoms (e.g., loss of smell or chest pain) have increased during a pandemic.

Excessive search for health-related information on the internet carried out is to reduce anxiety or stress, yet the results is the opposite. This excessive search can actually cause worse or more stressful which is called cyberchondria (Starcevic & Berle, 2013). Unconsciously, with their excessively gathering health-related information on the internet, individuals can actually increase their feelings of anxiety and stress (Bajcar & Babiak, 2019). It is more clearly expressed by (McElroy & Shevlin, 2013; Nuraini et al., 2019) defining cyberchondria demonstrate negative consequences, such as exacerbating the fear of disease, confusion about conflicting medical information, preoccupation in online search activities to the expense of personal activities, and it can also disrupt the relationship between individuals and medical personnel. The ease of gathering information via the internet is not a guarantee of obtaining valid information or hoaxes (Huang, et al., 2015). Excessive and fast-spreading misinformation can be dangerous, especially regarding Covid-19. In fact, WHO has specifically made infodemic about covid-19 a research priority (Laato et al. 2020). Platforms containing health information through social media are increasing, but that online information regarding Covid-19 also contains a large amount of misleading information (Li et al., 2020). The recommendations based on the research results of (Laato et al., 2020) suggested that to reduce the spread of misinformation on COVID-19 and cyberchondria, steps should be taken to increase healthy skepticism of health news while guarding against information overload.

Social comparisons, self-disclosure, and social media fatigue negatively impact fake news sharing (Talwar et al., 2019). Khan and Idris (2019) revealed four factors causing an increase in the sharing of unverified information: (1) Lack of experience of online environments; (2) lack of Information seeking and verification skills; (3) a lazy attitude towards verifying information; and (4) High Trust of online information. Talwar et al. (2019) added that Sharing fake news was predicted by online trust, self-disclosure, fear of missing out and being tired. Furthermore, Maftei and Holman (2020) presented the results of their research showing neuroticism is a factor having a significant positive effect on cyberchondria at the age level under 24 years, 24-44 years, and over 45 years. Meantime, optimism is not a predictor of cyberchondria in the age group under 45 years. In fact, it is a significantly negative predictor at the age level above 45 years. Similar findings on the level of education were negatively significant predictors of cyberchondria at the age level over 45 years. Another study conducted by Jungmann and Witthöft (2020) suggested that trait health anxiety and cyberchondria serve as risk factors, whereas information about the pandemic and adaptive emotion regulation might represent buffering factors for anxiety during a virus pandemic. Research conducted by Starcevic

and Berle (2013) stated that factors that may be relevant to trigger cyberchondria include perfectionist tendencies, uncertainty intolerance, and ambivalence regarding what should be considered trustworthy. In addition, the finding of research conducted by (Fergus and Dolan, 2014) revealed that there are similarities between cyberchondria and Problematic Internet Use (PIU). It is because they are both perceived as an effort to reduce negative emotions through excessive internet use. Furthermore, Starcevic (2020) explained that cyberchondria and PIU are connected through compulsivity, accompanying attention, repetition, online activity, accompanied by difficulty stopping the activity, and the feeling that someone has lost control of it. Considering these similarities, it is believed that cyberchondria can be considered a type of PIU (Fergus and Dolan, 2014). The factors causing the occurrence of PIU symptoms according to Ardiansyah (2018) are depression, low self-esteem, loneliness, the symptoms of antisocial tendencies and external control, psychological symptoms, social disinhibition, low social support, and pleasure with the internet.

Based on the idea of Bajcar and Babiak (2019), they revealed that cyberchondria is described as a variation of hypochondria and that there are similarities between cyberchondria and Problematic Internet Use (Fergus and Dolan, 2014). It is possible cyberchondria also has causal factors that are not considerably different from PIU, which is low self-esteem. It is in line with the idea of Bajcar and Babiak (2019) revealing that low self-esteem, health anxiety, and obsessive-compulsive symptoms can be considered as vulnerability factors for cyberchondria. With this convenience, the researchers' assumptions tend to make it easier for individuals with low self-esteem. It is because individuals with low self-esteem are afraid of negative judgments of other individuals. Low self-esteem is a negative assessment of oneself, feeling useless, unloved, and/or incompetent which is obtained since childhood through a long learning process based on the results of the interaction between family and environmental influences (Sorensen, 2006).

According to Sorensen (2006), one of the individuals' fundamental characteristics with low self-esteem is individuals possessing positive and negative information, and they receive excessively negative feedback. Individuals with low self-esteem will tend to focus on negative parts like failures, weaknesses, unskilled skills, and imperfections, while positive things will be discarded and regarded as strange things. It is in accordance with the idea of Hill (in Umah, 2017) stating the judgments or perceptions of other individuals can affect the ups and downs of individual self-esteem. When individuals with low self-esteem obtain negative ratings from other individuals, it will cause their self-esteem to be lower. Therefore, it is not surprising that individuals with low self-esteem tend to prefer gathering information online. It is because asking other people directly related to sensitive things, for example sexually transmitted diseases or mental health problems, requires courage because it might cause stigma (Aulia, 2019). It is in which stigma has a significant role in self-esteem (Crocker in Anggreni and Herdiyanto, 2017). It is in line with the research of Brekke, et. al. (in Cervera, et. al., 2003) explaining the stigma felt by individuals can affect self-esteem. Gathering health-related information on the internet cannot be generalized as wrong behavior. It is as stated by Bajcar, et al. (2019) that gathering health-related information on the internet for some people may lead to welfare and can generate feelings of relief. It can be assumed by researchers that gathering health-related information on the internet can be considered as a natural thing if carried out to increase knowledge or a temporary reference before going to a doctor. Dangerous is when individuals self-diagnose themselves or fully believe in the results of these gathering health-related

information, in which it causes anxiety and resulting in excessive and repeated search for health-related information (Doherty-Torstrick et al., 2016).

Gathering health-related information online can lead to a pathology if carried out excessively and causing feelings of anxiety about health (Starcevic and Berle, 2013). Individuals with low self-esteem tend to foster negative beliefs about themselves, in which they consider themselves less attractive, incompetent, boring, and less worthy than others. Low self-esteem is frequently associated with various psychopathologies (Bajcar and Babiak, 2019). It is possible that individuals believing that themselves is full of negativity as a sign of individuals with low self-esteem. Moreover, they will perceive health-related consultations online as a more psychologically pleasant way than meeting doctors face-to-face. Face-to-face with the doctor sometimes involves critical assessment by the individual and provides the opportunity to ask questions. For individuals with low self-esteem, it is quite a challenging task. Hence, individuals with low self-esteem are more likely to choose online for various purposes, including excessive gathering of health-related information than they with a stable self-concept. As a result, individuals with low self-esteem can become vulnerable to cyberchondria. Individuals with low self-esteem tend to foster negative beliefs about themselves, for example considering themselves less attractive, incompetent, and less worthy than other individuals (Bajcar and Babiak, 2019). It is possible individuals with negative self-esteem will find online health-related consultation a more psychologically convenient way than meeting face-to-face medical personnel when experiencing health symptoms. It is in which face-to-face with a doctor sometimes involves individual critical assessment and the opportunity to ask questions. It for individuals with low self-esteem is quite a challenging task. Hence, individuals with low self-esteem are more likely to choose online for various purposes, including excessive gathering of health-related information than they with a stable self-concept. As a result, individuals with low self-esteem can become vulnerable to cyberchondria. Based on the aforementioned research background, the researcher formulated the research question in this study as follows (1) Is there an effect of low self-esteem on cyberchondria in students? (2) How is cyberchondria in students described? (3) How is low self-esteem in students described?

This study aims at (1) determining the effect of low self-esteem on cyberchondria in students, (2) determining the description of cyberchondria in students, and (3) determining the description of ow self-esteem in students. This study provides theoretical significances for future studies on the topic of low self-esteem and cyberchondria. Furthermore, it provides practical significances as a consideration when planning interventions for individuals experiencing cyberchondria especially those caused by self-esteem problems.

II. LITERATURE REVIEW:

A. Cyberchondria Measuring Instrument

This research refers to some of the results of previous research conducted by McElroy and Shevlin (2013) to design the Cyberchondria Severity Scale (CSS) instrument. The results of 43 questions were tested on 200 students as subjects, as many as 33 items tested valid and reliable. Validity and reliability tests related to the Cyberchondria Severity Scale (CSS) instrument were also carried out in Europe by (Norr et al. 2015)The results are almost similar, in which the instrument is valid and reliable. However, one of the subscales, mistrust, is considered unnecessary in this study, and it is recommended to eliminate it. Research results Norr et al. (2015) is almost similar to the research results of Fergus (2014). What make both different are the research site which is in

North America, older subjects being the general population and the presence of two other instruments as a comparison. Jokić-Begić et al. (2019) conducted a study of three samples (N1 = 540; N2 = 379; N3 = 594) recruited online through the snowball method. They use the Short Cyberchondria Scale (SCS) as well as three comparison measures (Cyberchondria Severity Scale, Anxiety Sensitivity Index and Health Anxiety Questionnaire) via an online survey tool. The research findings indicated the SCS can be considered a satisfactory instrument for measuring cyberchondria. A similar research was also conducted by researchers from Indonesia, namely (Aulia 2019). It is in which the results showed that the Indonesian translated version of the CSS instrument is valid and reliable to be applied in Indonesia with students as subjects.

B. Cyberchondria And Low Self-Esteem

In addition to instrument validation research, there are several studies linking to cyberchondria with other variables, for example research conducted by Arif (2015) linking gathering online health-related information with anxiety in students. The result is that as many as 54% of research subjects in the high category, meaning that those gathering online health-related information experience anxiety. Ivanova (2013) connects this with welfare. The result is that problematic internet use leads to health anxiety which in turn can reduce subjective well-being, eudaimonic well-being and self-esteem, as well as a more significant impact of depression. In line with previous research, Bajcar and Babiak (2019) also examined the relationship between self-esteem and cyberchondria. It was discovered that self-esteem directly predicted cyberchondria and health anxiety and obsessive-compulsive symptoms partially mediated the relationship between self-esteem and cyberchondria. Low self-esteem can cause a person's fear to become sick, irritate the mind, and act out of control which can together lead to excessive internet use in gathering health-related information. The findings suggested low self-esteem can be considered a vulnerability factor for cyberchondria. Furthermore, Fergus and Spada (2018) contributed to the metacognitive conceptualization of cyberchondria which can be used as a basis for further research regarding the development of appropriate interventions for cyberchondria sufferers. Brown et al. (2020) argued metacognitive beliefs play an important role as causative factors of cyberchondria; metacognitive therapy is suggested to reduce these causative factors.

III. METHOD AND DATA COLLECTION:

A. Methods

The research design used was correlational quantitative research. This type of correlational research is used to determine the relationship between two or even more variables, in which it helps researchers make smarter predictions (Purwanto, 2016). In line with Azwar (2017) stating that the correlational research aims at investigating the extent to which variations in one variable are related to variations in one or more other variations, based on the correlation coefficient. Through a correlational approach, researchers can obtain information regarding the effect occurring between the independent variable (X), which is Low Self Esteem, and the dependent variable (Y), which is Cyberchondria. The population is a group of subjects that will be generalized from a research result (Azwar, 2017). (Purwanto, 2016) also revealed that the population (in the form of people, objects, or events) is a group that will be generalized as a result of a study.

As a population, this subject group must attract the interest of researchers and have certain characteristics differentiating it from other subject groups (Purwanto, 2016). The population in this study, including: 1) Students of Universitas Negeri Semarang. 2) Student aged 18-24 in which according to Suntrock, it is age in the transition period from adolescence to early

adulthood. 3) Having been gathering information related to health conditions on the internet. 3) The length of time to gather health-related information on the internet is 1-3 hours a day. 4) Feeling anxious or afraid of contracting certain diseases after gathering health-related information on the internet. 5) Gathering health-related information on the internet repeatedly or more than 3 times a day. 6) Willing to be a research sample

Based on the aforementioned characteristics, it is known that the number of subjects in the population is 167 students, with the following details:

Table 1. Research Population

Faculty	Total of Population
Faculty of Education	70
Faculty of Language And Literature	24
Faculty of Social Sciences	15
Faculty of Mathematics of Natural Sciences	18
Faculty of Engineering	12
Faculty of Sports Sciences	6
Faculty of Economics	19
Faculty of Law	3
Total	167

In this study, stratified random sampling was carried out proportionally (proportional). Azwar (2017) states that the procedure for taking stratified random samples is carried out proportionally (proportional). To find out the number of subjects in each sub-group or each stratum, the comparison is first sought. Then, the percentage of the sample from the population as a whole is determined. The percentage that has been determined is then applied in sampling for each sub-group or stratum. The population distribution by proportional random sampling used as the research sample is as follows:

Table 2. Research Sample

Faculty	Total of Sample
Faculty of Education	49
Faculty of Language And Literature	17
Faculty of Social Sciences	11
Faculty of Mathematics of Natural Sciences	13
Faculty of Engineering	8
Faculty of Sports Sciences	4
Faculty of Economics	13
Faculty of Law	2
Total	117

B. DATA COLLECTION:

The data was collected online using a scale. The data collection method in this study was obtained through measurement procedures, namely scale. The scale used in measuring Cyberchondria is a scale made based on the dimensions proposed by McElroy and Shevlin (2014) which have been modified by Aulia (2019) in her research. The scale is the Cyberchondria Severity Scale (CSS) revealing the four dimensions of cyberchondria, namely compulsion, distress, excessiveness and the need to be convinced (reassurance). The measurement was intended to measure the severity of cyberchondria behavior in individuals. The measuring instrument used to measure low self-esteem is the Low Self-Esteem Scale (LSES). The measurement was intended to measure the level of low self-esteem.

IV. RESULTS AND DISCUSSION:

The results showed cyberchondria can be affected by low self-esteem. This statement is evidenced by the results of data analysis using 1 predictor regression analysis. If the sign value <α 0.05, it can be stated that the hypothesis is accepted. In the calculation of the data analysis, the results of the significance score <α 0.05, so it can be concluded that Ha is accepted and Ho is

rejected. Hence, the dependent variable (X), which is low self-esteem, affects the independent variable (Y), which is cyberchondria. This calculation is through a one-way ANOVA analysis test which will be presented as follows:

Table 3. Hypothesis Test Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1947.667	1	1947.667	7,785	.006[b]
	Residual	28771.102	115	250,183		
	Total	30718.769	116			

a. Dependent Variable: Cyberchondria
b. Predictors: (Constant), Low Self Esteem

Table 3. Hypothesis test results showed the calculated F value of 7,785 with a significance of 0.006. In hypothesis testing of a study, Ha will be accepted if the value of the sign F count <α 0.05, and Ha will be rejected if the value of the sign F count> α 0.05. By looking at the F count of 7.785 with a sig. of 0.006, because the sig. value is <α 0.05 = 0.006 <α 0.05, it can be concluded that Ha is accepted, and Ho is rejected. Therefore, there is a significant effect of the low self-esteem as the independent variable (X) on the cyberchondria as the dependent variable (Y). Next, the regression line equation in data analysis to determine the number of predicted scores between the independent variable (X) and the dependent variable (Y) is as follows:

Table 4. Regression Line Equations

Model		Unstandardized Coefficients		Unstandardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	59,987	5,196		11,545	.000
	Low Self Esteem	.615	.220	.252	2,790	.006

a. Dependent Variable: Cyberchondria

Based on table 4. in column B for constant (a), it can be seen that the value is 59.987, while the score for the low self-esteem variable in column B is found to be (b) 0.615, so the regression line equation can be written as follows:

Y = bX + a
= 0,615X + 59,987

The result of the calculation of the regression line equation shows a constant value of 59,987, meaning that the consistent value of the cyberchondria variable is 59,987. The regression coefficient X of 0.615 states that if low self-esteem increases by 1 point, it will also cause an increase in cyberchondria by 0.615. The regression coefficient shows a positive value, so it can be stated that the direction of the effect of the low self-esteem on cyberchondria is positive. It means that if low self-esteem increases, the cyberchondria also increases.

The magnitude of the effect of low self-esteem on cyberchondria can be seen from the calculation of the effective contribution of variable X to variable Y. The formula used to determine the effective contribution of the

independent variable to the dependent variable is as follows:

$$SE = R^2 \times 100\%$$

Informations:

SE = Effective Donations

R2 = Coefficient of Determination

The value of R2 can be seen from the results of calculations using the help of a data processing program as follows:

Table 5. Score of coefficients of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.252[a]	.063	.055	15.81719

a. Predictors: (Constant), Low Self Esteem

b. Dependent Variable: Cyberchondria

The table above shows that the coefficient of determination or R2 is 0.063. Based on the effective contribution formula which has been detailed above, the calculation results are as follows:

SE = R2 x 100%
= 0,063 x 100%
= 6,3%

From the results of the previous calculations, it shows that the effective contribution value of variable X to variable Y is 6.3%. Hence, it can be concluded that the independent variable, which is low self-esteem, has an effect of 6.3% on the dependent variable, which is cyberchondria. Meanwhile, the other 93.7% were triggered or affected by other variables.

Consequently, it can be concluded that an effect between the independent variable is low self-esteem, on the dependent variable, which is cyberchondria, with evidence of the significance value of the hypothesis sign <α 0.05 = 0.006 <α 0.05. More clearly, Ha is accepted, and Ho is rejected. in other words, the hypothesis that says "there is an effect of low self-esteem on cyberchondria in students of Universitas Negeri Semarang (UNNES)" was stated to be significantly proven with an effective contribution of 6.3%.

Based on the above conclusions, it shows one of the factors affecting the cyberchondria is low self-esteem. Low self-esteem is a part of self-esteem. Previous research conducted by Ivanova (2013) revealed that cyberchondria was negatively related to well-being and self-esteem, and positively associated with depression. It is because uncontrolled use of the internet to gather information results in decreased levels of well-being and self-esteem and increased levels of depression.

Another previous research supporting this study was conducted by Bajcar and Babiak (2019) finding a direct negative relationship between low self-esteem and cyberchondria. It implies that low self-esteem leads to higher cyberchondria, whereas higher self-esteem may be associated with lower cyberchondria. Low self-esteem can intensify an individual's fear of getting sick, bring about disturbing thoughts, and uncontrollable actions, which together can lead to excessive use of the internet in gathering health-related information. The research also shows low self-esteem, health anxiety, and obsessive-compulsive symptoms are considered susceptibility factors for cyberchondria, especially during the Covid-19 pandemic.

It is in accordance with research conducted by Kimberly (in Ivanova, 2013) stating that individuals with low self-esteem and depression are extremely vulnerable to internet addiction. In short, Bajcar and Babiak (2019) also implied that low self-esteem leads to higher cyberchondria considered a PIU, but it is health related. It is consistent with previous findings stating that self-esteem can be considered as a predictor variable for problematic or pathological internet usage (Armstrong et. al. in Bajcar and Babiak, 2019). The idea regarding individuals with low self-esteem are those who are unsuccessful in their careers, or the

relationships is wrong (Sorensen, 2006). The fact is everyone can experience low self-esteem, even in seemingly confident people. This will experience an even more unfavorable impact when facing the current Covid-19 pandemic. As stated by Sorensen (2006), both introverts and extroverts can suffer from low self-esteem. Extroverts with low self-esteem spend their lives shifting from one activity to another, often forming relationships in which they cannot be separated, feel uncomfortable when their partner is with other people, even feel abandoned and unimportant. Extroverted individuals with low self-esteem tend to be unable to cope with silence or inactivity and will panic when they are alone. This condition is precarious because people were required to be able to carry out more social restrictions during the Covid-19 pandemic.

Bajcar and Babiak (2019) cited the explanations of several experts explaining individuals with low self-esteem have negative beliefs about themselves, for instance, considering that they are less attractive, incompetent, boring, and less worthy than others. These negative beliefs or judgments can equally be affected by negative judgments or perceptions of other individuals (Hill in Umah, 2017).

Therefore, it is not surprising that individuals with low self-esteem will tend to choose to gather information online. In line with the results of previous research conducted by Yang, et al., 2010) discovering that problematic Cellular Phone Use (CPU) has a positive relationship with low self-esteem among all groups of adolescents. It is because adolescents with negative self-concepts tend to improve their lives with CPU due to the availability of a place to exchange emotion and guarantee their feelings.

In connection with the gathering of health-related information on the internet during the Covid-19 pandemic, it is possible that individuals with low self-esteem will be easier than those having to meet face to face with other individuals or doctors. Individuals with low self-esteem will be freer to ask questions related to sensitive things, like their mental condition, on the internet without fear of getting stigma from other individuals (Aulia, 2019; Kanto et al., 2020; Umanailo et al., 2021), instead of having to do social distancing. In addition, it is a challenging task for individuals with low self-esteem when they are in a consultation session with a doctor, then they have to be involved in a critical assessment of the diagnosis and given the opportunity to ask questions (Bajcar and Babiak, 2019). Based on the explanation above, it is possible that individuals with low self-esteem are more likely to choose the internet for a variety of purposes, including excessive health-related information, compared to individuals with a stable self-concept or high self-esteem (Bajcar and Babiak, 2019). Hence, individuals with low self-esteem can become vulnerable to cyberchondria.

The inferential calculation results show that the effective contribution of the low self-esteem variable to cyberchondria is only 6.3%. In this case, it is equally possible that 93.7% is affected by other factors on the prevalence of cyberchondria among students. Other factors that can be a susceptibility to cyberchondria are health anxiety and obsessive-compulsive symptoms. Some evidence supports the relationship between health anxiety and obsessive-compulsive symptoms with cyberchondria, one of which is a research conducted by Bajcar and Babiak (2019) in which the result is that obsessive-compulsive symptoms and health anxiety cause a significant effect on cyberchondria. Research conducted by Starcevic and Berle (2013) also suggested that obsessive-compulsive symptoms are relevant for cyberchondria. It is also supported by Fergus (2014) showing there is a correlation between cyberchondria and obsessive-compulsive symptoms in the moderate category. It is because individuals with obsessive-compulsive symptoms will excessively seek medical information with

the aim of reducing disturbing and unpleasant thoughts in an effort to gain health-related comfort.

In addition, Starcevic and Berle (2013) identified relevant factors that can trigger cyberchondria, including perfectionist tendencies, uncertainty intolerance, and ambivalence about what to believe. Initially, perfectionist tendencies can trigger cyberchondria because of the abundance of available information that can be assuredly found on the internet. Some individuals may hope that health-related information on the internet can provide a comprehensive or accurate explanation. Therefore, although they experience anxiety regarding the answer they thought was perfect, they had to continue their first search.

Furthermore, cyberchondria behavior can also be triggered by intolerance of uncertainty related to the health information having been obtained. Individuals tend to experience uncertainty during the gathering of online health-related information. It begins with the individual's belief that health-related information on the internet will reduce uncertainty, but it actually causes the contrary effect. Individuals will feel the information obtained is ambiguous and uncertain so that the search continues.

Lastly, cyberchondria can also be triggered by ambivalence about what to believe. It is because there are many websites proving health-related information available on the internet. However, often the information is inaccurate, incomplete, too simple, and maybe even misleading. Thus, realizing this, individuals will continue gathering health-related information until they feel they have gathered information on a reliable website.

The factors that have been described above are assumed to represent other variables that can affect the cyberchondria behavior. On the other hand, these factors can be a vulnerability or other supporting factors, so that the level of cyberchondria in individuals can be stated to be high.

A. OVERVIEW OF CYBERCHONDRIA AND LOW SELF ESTEEM:

The results of the data obtained for the cyberchondria scale were categorized into three levels, namely high, medium, and low. The general overview of cyberchondria is as follows:

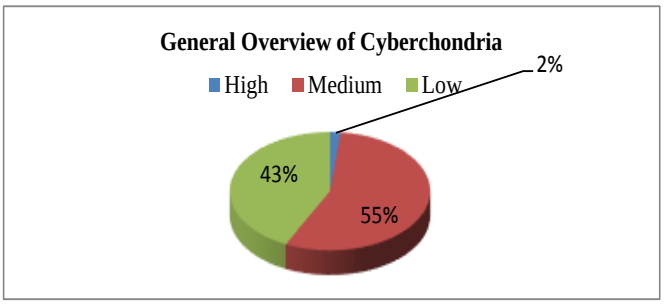
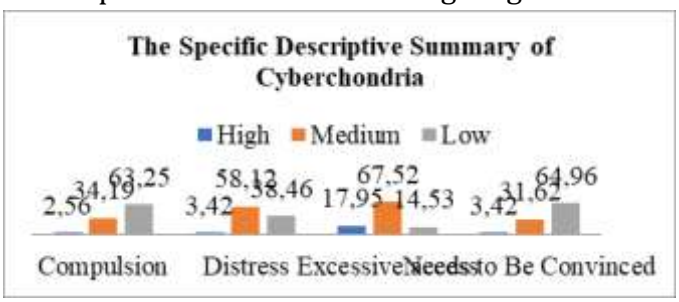


Figure 1. General Overview of Cyberchondria

Based on the results of the calculation, it was found that 55% of cyberchondria or as many as 65 subjects were in the medium category. Thus, it can be concluded that cyberchondria is in the medium category which tends to be low. The specific descriptive summary of cyberchondria will be presented in the following diagram:



More can be seen in Figure 2. Specific Descriptive Summary of Cyberchondria for each aspect of cyberchondria. It appears that although in general cyberchondria in the medium category tends to be low. On the aspect of excessive access, it seems that the findings are slightly opposite, that is, medium tends to be high. Meanwhile, the other three aspects, which are compulsiveness, distress, and the need to be convinced are in line with the general picture of cyberchondria. Meanwhile, the low self-esteem scale will be

categorized into three levels, which are mild, moderate, and severe. The general overview of low self-esteem in research subjects is as follows:

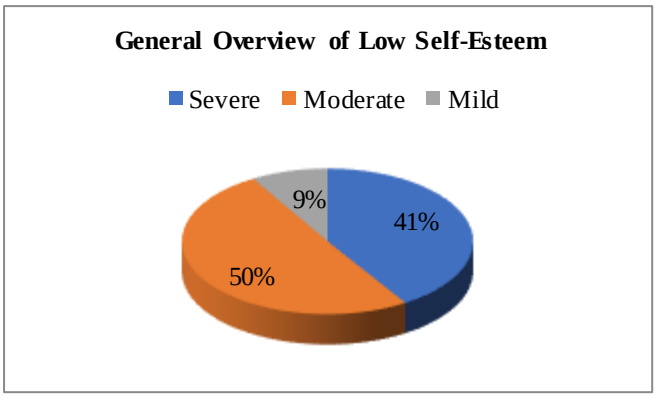


Figure 3. General Overview of Low Self-Esteem

Based on the results of the calculation, it was found that 50% of Low Self-Esteem or as many as 59 subjects were in the medium category. Thus, it can be concluded that Low Self-Esteemis in the moderate category which tends to be severe. The specific descriptive summary of Low Self-Esteem will be presented in the following diagram:

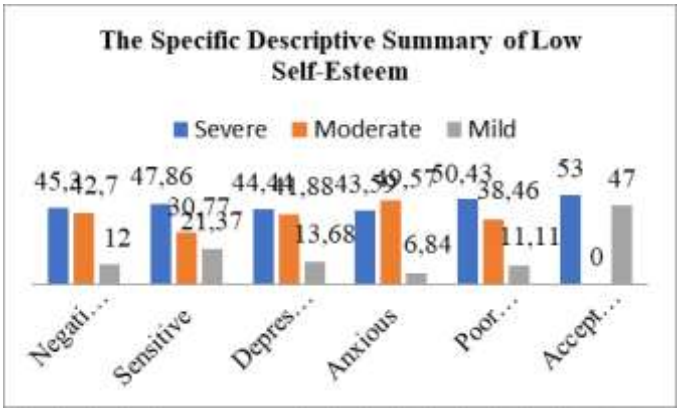


Figure 4. The Specific Descriptive Summary of Low Self-Esteem

In general, the low self-esteem condition of research subjects is moderate to severe. It is in line with the overview of anxiety in the subject. Meanwhile, negative, sensitive, depressed, poor communication skills, and accepting all input from others tend to be in the severe category. It's just there are two different poles in accepting all other people's input, as much as 53% appears in the severe category, while the remaining 47% is in the mild category. It shows there are different responses in response to other people's judgments. In the covid-19 pandemic, some students may experience cyberchondria because they are frightened of being evaluated negatively by medical personnel, supported by poor communication skills that make them feel more comfortable gathering health-related information via the internet. Negative self-feelings, anxiety, depression, and negative self-statements support the overview of cyberchondria in the moderate category. An interesting finding, cyberchondria that are in the medium category tends to be low. It could be that there is an aspect of receiving input from other people classified as mild, so that in making a person's decision, it is not only focused on other people's assessments, including in gathering verified and valid health-related information during the pandemic.

The data were collected in one of the universities in the proportional cluster random sampling, so that it could not be generalized to a wider student population. Future researchers can conduct similar studies or correlate cyberchondria with other predictors with a more representative sample. In addition, this research was conducted during the Covid-19 pandemic against the background of the problems that occurred in these conditions. Research on cyberchondria and low self-esteem in other contexts may need to be further developed. The description of low self-esteem aspects thought to play a role in the severity of cyberchondria needs to be studied more deeply so that appropriate intervention programs can be designed for individuals experiencing cyberchondria.

Based on the results of the research and discussion having been presented, it can be concluded that there is an effect of low self-esteem on cyberchondria among students at Universitas Negeri Semarang. If low self-esteem is severe, then cyberchondria is also high. The general picture of cyberchondria among students at Universitas Negeri Semarang is in the medium

category which tends to be low. In general, the low self-esteem of students at Universitas Negeri Semarang is in the moderate category, which tends to be severe.

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