




Psychocentrum Review

ISSN 2656-8454 (Electronic) | ISSN 2656-1069 (Print)
Editor:  Sisca FolastrisPublication details, including author guidelines
URL: <http://journal.unindra.ac.id/index.php/pcr/about/submissions#authorGuidelines>

Psychological Impact Analysis on Adolescents with Cyberchondria: a Literature Review

Henny Indreswari, Shabrina Muyassirotul 'Aliyah, Achmad Miftachul 'Ilmi, Khairul Bariyyah
Universitas Negeri Malang, Malang, Indonesia

Article History

Received : 9 Oktober 2022
Revised : 24 November 2022
Accepted : 30 November 2022

How to cite this article (APA 6th)

1st Indreswari, H, 2nd 'Aliyah, S. M, 3rd 'Ilmi, A. M, 4nd Bariyyah, K. (2022). Psychological Impact Analysis on Adolescents with Cyberchondria: a Literature Review. *Psychocentrum Review*, 4(3), 367-376. DOI: 10.26539/pcr.431814The readers can link to article via <https://doi.org/10.26539/pcr.431814>

Correspondence regarding this article should be addressed to:

Henny Indreswari, Universitas Negeri Malang, Malang, Indonesia, E-mail: henny.indreswari.fip@um.ac.id

SCROLL DOWN TO READ THIS ARTICLE



Universitas Indraprasta PGRI (as Publisher) makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications. However, we make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Universitas Indraprasta PGRI. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information.

This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

Copyright by Indreswari, H, 'Aliyah, S. M, 'Ilmi, A. M, Bariyyah, K. (2022)

The authors whose names are listed in this manuscript declared that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript. This statement is signed by all the authors to indicate agreement that the all information in this article is true and correct.

Original Article


Psychological Impact Analysis on Adolescents with Cyberchondria: a Literature Review

Henny Indreswari*, Shabrina Muyassirotul 'Aliyah, Achmad Miftachul 'Ilmi, Khairul Bariyyah
Universitas Negeri Malang, Malang, Indonesia

Abstract. The development of information and communication technology has led teenagers to use gadgets and the internet for prolonged periods of time. Besides being used as a means of entertainment and communication, teenagers nowadays tend to search for health information through the internet. However, some people are anxious about their health condition and begin to diagnose themselves or seek certainty on the internet. Excessive searching for health information on the internet can lead to cyberchondria, which is associated with fear and anxiety. To support these efforts, this study aims to analyze the psychological impact of cyberchondria on teenagers. The methodology employed in this study was a literature review that involved five stages: gathering literature, selecting relevant materials, evaluating the literature, drawing conclusions, and discussing the research results, using a total of 12 relevant articles. The results showed that the psychological impact of cyberchondria on teenagers consisted of cognitive, affective, and conative effects. Moreover, cyberchondria can also cause non-specific somatic complaints in teenagers. The findings of this study can serve as a reference for future researchers interested in the topic of cyberchondria.

Keywords: Psychological impact; adolescent characteristics; cyberchondria

Corresponding author: Henny Indreswari, henny.indreswari.fip@um.ac.id, Malang, Indonesia

 This work is licensed under a CC-BY-NC

Introduction

In the 21st century, information and communication technology has undergone rapid development. The rapid development of information and technology has made the internet the main communication tool favored by the public. According to Akbar et al. (2019), the development of internet usage as a means of communication has become even more rapid since the internet became accessible through gadgets. The Indonesian Minister of Communication and Information Technology, Johnny G. Plate, stated at the National Assembly of the Telecommunication Network Providers Association that Indonesia is currently the fourth country in the world with the largest number of internet users and has an internet penetration rate of 73.7% of the total population or 202.6 million users (Kementerian Komunikasi dan Informatika Republik Indonesia, 2021). A survey conducted by Data Reportal also found that internet users in Indonesia reached 204.7 million in January 2022 (Kemp, 2022).

Indonesian Internet Service Providers Association (APJII) (in Angesti & Oriza, 2018) explained the composition of internet users by age, with young people aged 13-18 being the highest with 75.50%. A study by Ayar et al. (2017) on 609 students from three high schools located in Turkey found that 27.6% of students spent an average of 5 to 14 hours a day using gadgets, and 23.1% spent more than 40 hours per week accessing the internet. The collaboration

of the internet and gadgets provides various conveniences for teenagers to search for information and communicate through various available applications, ranging from SMS, MMS, chatting, email, browsing, and other social media facilities (Akbar et al., 2019; Marpaung, 2018). This is what makes teenagers comfortable using gadgets and accessing the internet for a long time.

According to Alpaslan (2016), besides using the internet for communication and entertainment, adolescents and young adults today are also assumed to use the internet for health information seeking. This statement is supported by the fact that about 75% of internet users worldwide search for information on the internet to diagnose the symptoms they are experiencing (Bajcar et al., 2019). In Indonesia, health service platforms such as Alodokter, Halodoc, Riliv, and other platforms are widely used by teenagers to search for information about physical and mental health. This is evidenced by the total monthly active users of Alodokter and Halodoc reaching 20 million (IndoTelko, 2019, 2021), as well as Riliv's Instagram followers reaching 325,000. Instead of utilizing books, encyclopedias, or consulting directly with experts/professionals, most teenagers tend to trust the health information they find on the internet.

This phenomenon may occur because teenagers feel anxious about their health, afraid of what experts say about their complaints, and lack trust in the experts who will handle or have handled their case in different situations (Akbar, 2019; Hashemi et al., 2020). Accessing health information on the internet can be beneficial when it educates individuals about the nature, causes, prevention, and treatment of certain health conditions. However, for some people who are stressed or anxious about their health, the internet can be accessed to self-diagnose or obtain certainty about their health (White & Horvitz dalam McMullan et al., 2019). The fears and anxieties that arise from excessive health information seeking on the internet can lead to cyberchondria.

Starcevic & Berle (in Masruroh, 2020) define cyberchondria as excessive or repetitive online health information seeking driven by the need to reduce pressure or anxiety, but resulting in the opposite, worsening. Newby & McElroy (2020) state that cyberchondria consists of two components, namely behavioral and emotional components. The behavioral component of cyberchondria involves excessive and repetitive online searches related to health information, while the emotional component of cyberchondria is anxiety caused by searching, or inability to control searching behavior. (McElroy & Shevlin, 2014) who defined cyberchondria, have negative consequences, such as exacerbating fears of illness, confusion about conflicting medical information, being absorbed in online search activities to the detriment of personal activities, and disrupting the relationship between individuals and experts/professionals.

Based on several previous studies, researchers concluded three factors closely related to cyberchondria, including Problematic Internet Use (PIU), health anxiety, and self-esteem (Bajcar & Babiak, 2021; Fergus & Spada, 2017; Starcevic et al., 2019). These three factors can have various negative impacts on individuals experiencing cyberchondria. Starcevic et al. (2020) stated that the correlation between cyberchondria and PIU reflects common characteristics of cyberchondria and PIU, namely excessive behavior and lack of self-control in online activities, despite many negative consequences. While individuals with health anxiety tend to have difficulty stopping thinking about a disease when it comes to their mind (Tyrer et al., 2016). Permata et al. (2021) added that the impact of health anxiety is emotional pressure, the emergence of non-specific somatic complaints, low self-assessment of mental and physical health, and increased use of health services.

Thus, cyberchondria can be conceptualized as a unique pattern of behavior and emotion among junior high school students. Junior high school students are those in the early adolescent stage with an age range of 12-15 years old. This period is a transition from childhood to adulthood. All developmental tasks during adolescence are focused on addressing childish attitudes and behaviors, as well as preparing oneself to face adulthood (Kemendikbud, 2016). The phenomenon of cyberchondria is related to adolescent developmental tasks in the Personal Development aspect, namely preparing oneself, accepting and having a positive and dynamic

attitude towards the physical and psychological changes that occur in oneself for a healthy life. In the Student Self-Reliance Competency Standards (Kemendikbud, 2016), these developmental tasks are summarized in the internalization goals as follows: (1) Introduction, knowing one's abilities and desires, (2) Accommodation, accepting oneself positively, (3) Action, showing behavior that reflects diversity in one's environment.

To facilitate the achievement of developmental tasks in the aspect of personal development in adolescents, the role of a counselor is very important. The optimization of adolescent developmental task achievement in the aspect of personal development can be done through the provision of Guidance and Counseling services, both in the form of preventive and curative services. To support these efforts, this study aims to analyze the psychological impact of adolescents experiencing cyberchondria. This research is expected to add references in the field of Guidance and Counseling, which can later be used by counselors to design Guidance and Counseling services according to the needs of students experiencing cyberchondria

Method

The research method used in this study is literature review. Literature review is a method used to identify, evaluate, and interpret findings obtained from previous research (Hsieh & Shannon, 2005). In this study, literature review was used to describe the research topic based on a theoretical perspective (Creswell, 2017). Additionally, Mirzaqon & Purwoko (2018) added that literature review can be used to gather data and information from various materials found in the library, such as books, historical accounts, documents, magazines, and others. Literature review method becomes an effective way to establish a strong theoretical foundation in research (Ridwan et al., 2021).

Materials and Apparatus

This study used various materials in the form of literature or previous research collected through various search engines, including but not limited to Scencedirect, Springerlink, WoS, DOAJ, and Garuda, covering various topics related to the subject of the research being discussed.

Procedures

The five steps in conducting a literature review consist of (1) literature collection; (2) literature selection; (3) reviewing the literature sources; (4) drawing conclusions from the study; and (5) discussing the study results (Hsieh & Shannon, 2005).

Design or Data Analysis

Relevant literature related to the research topic was collected using various search engines such as Scencedirect, Springerlink, WoS, DOAJ, and Garuda. The collection was done using keywords "gadget usage," "cyberchondria," and "psychological impact of adolescents," resulting in 50 relevant articles. Then, literature selection was done by limiting the minimum research published in 2018 and written in Indonesian or English, resulting in 12 articles included in this study.

Data analysis using Ulfatin's content analysis (2013) was used to refer to the results and recommendations from the literature sources that passed the selection. From the process of drawing conclusions from the study, the resulting conclusions will be discussed in the study

results discussion. In this way, the literature review conducted can produce accurate and reliable study results.

Result

Literature search related to "Cyberchondria" resulted in 12 relevant articles. Article review was conducted by identifying the psychological impact on adolescents experiencing Cyberchondria in each article. In more detail, the analysis results are presented in the following table:

Table 1. Analysis Results of Psychological Impacts of Cyberchondria on Adolescents

No	Research Topic	Researcher	Psychological Impacts of Cyberchondria
1	Opportunities and Challenges of Consumer Health Information on the Internet: Is Cyberchondria an Emerging Challenge?	Kalantari et al. (2021)	Increased anxiety, fear, and the risk of developing anxiety disorders, disruptions in doctor-patient relationships, misinterpretation of symptoms and information, excessive worry, self-diagnosis
2	Is Cyberchondria a New Transdiagnostic Digital Compulsive Syndrome? A Systematic Review of The Evidence	Vismara et al. (2020)	Increased anxiety about health status, exaggerated feelings, tendency to self-diagnose, disruptions in doctor-patient relationships
3	Cyberchondria Amidst COVID-19 Pandemic: Challenges and Management Strategies	Varma et al. (2021)	Increased health anxiety, stress, depression, and obsessive-compulsive disorder (OCD), self-diagnosis, self-treatment, escalating suffering that can lead to high blood pressure and muscle spasms usually triggered by sudden events
4	Cyberchondria: Overlap with Health Anxiety and Unique Relations with Impairment, Quality of Life, and Service Utilization	Mathes et al. (2018)	Feeling as though healthcare professionals cannot provide more information than is available online
5	The Impact of Internet-Delivered Cognitive Behavioural Therapy for Health Anxiety on Cyberchondria	Newby and McElroy (2020)	Uncertainty about internet searches, encouraging individuals to do further online searches, experiencing pressure and increased anxiety
6	Cyberchondria and Its Effects on Anxiety during Covid-19 Pandemic	Shekar and Aravantagi (2021)	Spending time online seeking certainty, disruption of negative emotional states, disruption or neglect of other activities
7	Examination of The Relationship Between Smartphone Addiction and Cyberchondria in Adolescents	Kose and Murat (2021)	Excessive time spent browsing the internet, creating high levels of stress and anxiety due to the negative effects of the information found, triggering compulsive behavior and affecting daily life activities because of that behavior
8	Cyberchondria and Its Measurement. The Polish Adaptation and Psychometric Properties of The Cyberchondria Severity Scale CSS-PL	Bajcar et al. (2019)	Strengthening fear of illness

No	Research Topic	Researcher	Psychological Impacts of Cyberchondria
9	Unveiling the Relationships between Cyberchondria and Psychopathological Symptoms	Arsenakis et al. (2021)	Repetitive internet search behavior, increased health anxiety, other negative emotional responses
10	Hubungan Kecemasan Kesehatan dengan Ketakutan Terhadap COVID-19 Pada Remaja Akhir di Jakarta	Permata et al. (2021)	Emotional pressure, increased health anxiety, appearance of non-specific somatic complaints, low self-evaluation of mental and physical health, and increased use of health services
11	Dark Side Consequences of Cyberchondria: An Empirical Investigation	Khan and Pandey (2022)	Tendency to self-treat
12	Associations Between the Perceived Severity of the COVID-19 Pandemic, Cyberchondria, Depression, Anxiety, Stress, and Lockdown Experience: Cross-Sectional Survey Study	Han et al. (2021)	Unreasonable thoughts, unnecessary panic, excessive attention to health issues, and potentially higher levels of depression.

Discussion

Adolescents

Students in junior high school fall under the category of early adolescence, typically aged between 12-15 years old (Wendari et al., 2016). This stage is a transition phase from childhood to adulthood. Hurlock (2011) stated that the level of attitude and behavior changes during early adolescence is parallel to the level of physical changes. Desmita (2017), Hurlock (2011), Ali & Asrori (2012) explained in detail the characteristics of teenagers in several aspects, including physical, cognitive, social, emotional, moral, and spiritual aspects..

The physical growth of junior high school students occurs rapidly as a result of hormone and organ maturation, especially related to sexual hormones and organs (Kemendikbud, 2016). Signs of physical changes in adolescents occur in the context of puberty. In this case, generally girls experience rapid growth at the age of 10.5 years and boys at the age of 12.5 years (Desmita, 2017). Meanwhile, from Piaget's cognitive theory perspective, adolescence has reached the formal operational thought stage (Desmita, 2017). At this stage, children can already think abstractly, develop their formal thoughts, and begin to achieve logic and reasoning. This development results in adolescents becoming critical, having a high sense of curiosity, and considering adults unable to understand them.

Ali & Asrori (2019) refer to adolescence as a social period because throughout adolescence, social relationships become increasingly visible and dominant. Along with age development and societal demands, teenagers realize the need to establish relationships with others or try to find companionship. The emergence of an interest in the opposite sex also causes teenagers to try to have close friends of the opposite sex. Changes in physical, cognitive, and social aspects cause teenage emotions to easily fluctuate. Rapid physical changes cause teenagers to tend to be isolated, feeling alienated, less attention from others, or even feeling ignored. In addition, at this time, feelings of love, sensitivity, negative emotions, reactive to events, and temperamental traits begin to emerge.

According to Kohlberg (in Desmita 2017), the level of adolescent moral reasoning is at the conventional stage. At this level, teenagers only comply with rules and moral expressions based on family, group, or community expectations. However, Monks (in Ali & Asrori, 2012) stated that the development of adolescent morality is marked by the growing awareness of the obligation to maintain existing power and institutions, even though they are not yet able to be

held personally accountable. Regarding spiritual development, Desmita (2017) mentioned that adolescents are in the Synthetic-Conventional Faith stage. At this stage, teenagers begin to seek deeper concepts about God and existence, start questioning the truth of their own religious beliefs, but most still conform to the beliefs of others and are not yet able to analyze other religious ideologies.

Cyberchondria

The term cyberchondria was created in the mid-1990s by the British media by merging the words "cyber" and "hypochondriasis". After that, cyberchondria became a frequently used term in mainstream media and eventually in academic literature, to describe individuals who search for health-related information online or display a diagnosable mental illness (Loos, 2013). Cyberchondria is not specifically mentioned in DSM-5 but is indirectly referenced in the diagnostic feature descriptions of Illness Anxiety Disorder, where it is stated that patients "excessively research suspected illnesses on the internet" (Mathes et al., 2018).

McElroy & Shevlin (2014), describe cyberchondria as a multidimensional construct that reflects elements of anxiety and compulsivity, involving increased anxiety about one's own health status as a result of excessive review of online health information. While Vismara et al. (2020) define cyberchondria as unfounded concerns about common symptoms based on the review of search results and literature on the web. Starcevic & Berle (2013) add that cyberchondria is excessive or repetitive online searching related to health driven by the need to reduce pressure or anxiety, but with results that are counterproductive, exacerbating the condition. Thus, it can be concluded that cyberchondria is an increase in pressure or anxiety caused by excessive searching for health information on the internet.

Cyberchondria is not only related to the search for physical health information, but also related to the search for mental health information (Mathes et al., 2018). According to McMullan et al. (2019), White & Horvitz acknowledge that using the internet to look up health information can be advantageous in informing individuals about the characteristics, origins, prevention, and management of certain health issues. However, when people feel worried or anxious about their health, they may turn to the internet to either self-diagnose or find reassurance.

Individuals who search for health information online may not feel reassured by the search and instead experience pressure and increased anxiety (Newby & McElroy, 2020). In other words, the search causes an increase in difficulty and drives ongoing online searches.

According to McElroy & Shevlin (2014), cyberchondria consists of five dimensions, namely: (1) Compulsion, describing how excessive searching for health information on the internet can hinder other activities; (2) Distress, reflecting the more subjective and deeper feelings associated with searching for health information on the internet; (3) Excessiveness, describing excessive and repeated searching for health information on the internet; (4) Seeking Finding Reassurance, increasing anxiety and the need to consult with professionals about information obtained from the internet; (5) Mistrust of Medical Professionals, the emergence of distrust towards professionals. Meanwhile Kose & Murat (2021) It can be stated that there exist four underlying dimensions of cyberchondria, which are: spending an excessive amount of time on the internet searching for health information, experiencing high levels of stress and anxiety due to negative effects of the information found, exhibiting compulsive behavior that interferes with daily activities, and searching for a sense of security.

The Psychological Impact of Adolescents Experiencing Cyberchondria

Cyberchondria is closely related to searching for physical and mental health information on the internet. According to Kalantari et al. (2021), inadequate health information searching on the internet can increase anxiety, fear, and the risk of developing anxiety disorders and diseases. This opinion is supported by McElroy and Shevlin (in Vismara et al. 2020) who state that cyberchondria involves increased anxiety about health status, resulting from excessive review of health information on the internet that includes two main cognitive-emotional domains,

excessive feelings and increased anxiety. Varma et al. (2021) add that cyberchondria is closely related to increased health anxiety, stress, depression, and is also associated with obsessive-compulsive disorder (OCD).

Individuals with cyberchondria rely on the internet for health information, which can make them feel as if healthcare professionals may not provide them with more information than what is available online (Mathes et al., 2018). However, searching for health information on the internet can encourage further searching, which can increase difficulty and future searching (Newby & McElroy, 2020). This is due to inaccurate and unreliable information on the internet, affecting individuals' anxiety levels about their health and increasing their sense of ignorance (Kose & Murat, 2021). This ignorance can lead individuals to spend time online seeking certainty, negative emotional disturbance, and also interference or neglect of other activities (Shekar & Aravantagi, 2021). Thus, it can be said that cyberchondria causes individuals to spend excessive time surfing the internet, creating high levels of stress and anxiety due to the adverse effects of the information found, as well as promoting compulsive behavior and affecting daily life activities because of such behavior..

According to Bajcar et al. (2019), intensive and repetitive health information searching can reinforce fear of disease. Individuals with health anxiety tend to have difficulty stopping thinking about a disease when it comes to mind (Tyrer et al., 2016). The impact is emotional pressure, increased health anxiety, emergence of non-specific somatic complaints, low self-assessment of mental and physical health, and increased use of health services (Arsenakis et al., 2021; Permata et al., 2021). In this case, individuals with cyberchondria will request more frequent consultations with personal healthcare professionals and other healthcare professionals to request various medical investigations (Starcevic et al., 2020). However, Kalantari et al. (2021) and Vismara et al. (2020) state that excessive internet use as a source of health information can also cause problems for the doctor-patient relationship, due to individuals' lack of trust in healthcare professionals..

Excessive health anxiety caused by cyberchondria may lead to seeking help and treatment. However, inaccurate and unreliable information on websites and online forums can mislead people into misinterpreting symptoms and information, causing undue worry and self-diagnosis (Kalantari et al., 2021). In a survey of 12,000 people in 12 different countries, 12% to 40% of the population often search for health information on the internet, with nearly one in two doing so to self-diagnose (Vismara et al., 2020). According to Khan and Pandey (2022), cyberchondria positively influences the tendency for self-treatment. However, self-diagnosis and self-treatment can put individuals at risk due to their lack of medical knowledge or description of their medical condition (Varma et al., 2021).

In general, McElroy & Shevlin (2014) state that cyberchondria has negative consequences, such as damaging psychological and emotional health, worsening fears about diseases, confusion regarding conflicting medical information, becoming preoccupied with online search activities to the point of sacrificing personal activities, wasting time and money on unnecessary tests, reducing trust in professionals, and disrupting relationships between individuals and professionals. add that cyberchondria can cause irrational thoughts, unnecessary panic, excessive attention to health issues, and higher levels of depression. Meanwhile, Varma et al. (2021) mention negative impacts of cyberchondria related to physical health, such as sustained suffering that can lead to high blood pressure and muscle spasms triggered by shocking events, such as someone being sick or the news of a loved one's death. This is supported by Permata et al. (2021) opinion that cyberchondria can cause the emergence of non-specific somatic complaints.

Conclusion

Based on the results of the study and discussion conducted, it was found that the psychological impact on teenagers who experience cyberchondria consists of cognitive, affective, and conative impacts. The cognitive impact experienced by teenagers includes confusion about conflicting medical information, misinterpreting symptoms and information, difficulty stopping thinking about a disease when it comes to their mind, and the emergence of irrational thoughts. The affective impact experienced by teenagers includes increased pressure and anxiety, excessive fear and worry, stress, lack of confidence in internet searches, doubting health professionals, negative emotional disturbances, low self-evaluation of mental and physical health, unnecessary panic, excessive attention to health issues, and can lead to higher levels of depression. Meanwhile, the conative impact experienced by teenagers includes a tendency to self-diagnose and self-treat, obsessive-compulsive disorder (OCD), spending excessive time online seeking certainty, disruption or neglect of other activities, increased use of health services, wasting time and money on unnecessary tests, and disrupting the relationship between the individual and the professional/health expert. In addition, cyberchondria can also cause non-specific somatic complaints, such as high blood pressure and muscle spasms that are generally triggered by surprising events.

References

- Akbar. (2019). *Analisis Pasien Self-Diagnosis Berdasarkan Internet pada Fasilitas Kesehatan Tingkat Pertama*.
- Akbar, R. S., Aulya, A., Psari, A. A., & Sofia, L. (2019). Ketakutan Akan Kehilangan Momen (FoMo) Pada Remaja Kota Samarinda. *Psikostudia J. Psikol*, 7(2), 38.
- Ali, M., & Asrori, M. (2019). *Psikologi remaja: Perkembangan peserta didik*.
- Alpaslan, A. H. (2016). Cyberchondria and adolescents. *International Journal of Social Psychiatry*, 62(7), 679–680. <https://doi.org/10.1177/0020764016657113>
- Angesti, R., & Oriza, I. D. I. (2018). Peran Fear of Missing Out (FoMO) Sebagai Mediator Antara Kepribadian dan Penggunaan Internet Bermasalah. *Jurnal Muara Ilmu Sosial, Humaniora, Dan Seni*, 2(2), 790–800.
- Arsenakis, S., Chatton, A., Penzenstadler, L., Berle, D., Starcevic, V., Viswasam, K., & Khazaal, Y. (2021). *Unveiling the relationships between cyberchondria and psychopathological symptoms*. 143(September), 254–261. <https://doi.org/10.1016/j.jpsychires.2021.09.014>
- Ayar, D., Bektas, M., Bektas, I., Kudubes, A. A., Ok, Y. S., Altan, S. S., & Celik, I. (2017). The Effect of Adolescents' Internet Addiction on Smartphone Addiction. *Journal of Addictions Nursing*, 28(4), 210–214.
- Bajcar, B., & Babiak, J. (2021). Self-Esteem and Cyberchondria: The Mediation Effects of Health Anxiety and Obsessive–Compulsive Symptoms in a Community Sample. *Current Psychology*, 40(6), 2820–2831. <https://doi.org/10.1007/s12144-019-00216-x>
- Bajcar, B., Babiak, J., & Olchowska-Kotala, A. (2019). Cyberchondria and Its Measurement. The Polish Adaptation and Psychometric Properties of The Cyberchondria Severity Scale CSS-PL. *Psychiatria Polska*, 53(1), 49–60. <https://doi.org/10.12740/PP/81799>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Desmita. (2017). *Psikologi Perkembangan* (PT Remaja Rosdakarya (ed.); PT Remaja). PT Remaja Rosdakarya.
- Fergus, T. A., & Spada, M. M. (2017). Cyberchondria: Examining relations with problematic Internet use and metacognitive beliefs. *Clinical Psychology & Psychotherapy*, 24(6),

1322–1330.

- Han, L., Zhan, Y., Li, W., Xu, Y., Xu, Y., & Zhao, J. (2021). Associations Between the Perceived Severity of the COVID-19 Pandemic, Cyberchondria, Depression, Anxiety, Stress, and Lockdown Experience: Cross-sectional Survey Study. *JMIR Public Health and Surveillance*, 7(9), e31052.
- Hashemi, S., Ghasem, S. H., Shalaleh Dini, S., Griffiths, M. D., Lin, C. Y., & Pakpour, A. H. (2020). The Mediating Effect of The Cyberchondria and Anxiety Sensitivity in The Association Between Problematic Internet Use, Metacognition Beliefs, and Fear of COVID-19 Among Iranian Online Population. *Heliyon*, 6(10), 0–5. <https://doi.org/10.1016/j.heliyon.2020.e05135>
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.
- Hurlock, E. B. (2011). *Psikologi Perkembangan, Suatu Pendekatan Sepanjang Rentang Kehidupan. Terjemahan Istiwidayanti dan Soedjarwo*. Penerbit Erlangga.
- IndoTelko. (2019). *Alodokter Masuk 10 Besar Startup di Indonesia*. 27 Juni.
- IndoTelko. (2021). *HUT ke-5, Halodoc Siap Berlari Kencang*. 26 April.
- Kalantari, A., Valizadeh-Haghi, S., Shahbodaghi, A., & Zayeri, F. (2021). Opportunities and Challenges of Consumer Health Information on the Internet: is Cyberchondria an Emerging Challenge? *Library Philosophy and Practice*, 4990.
- Kemendikbud. (2016). *Panduan Operasional Penyelenggaraan Bimbingan Dan Konseling Sekolah Menengah Pertama (SMP)*.
- Kementerian Komunikasi dan Informatika Republik Indonesia. (2021). *Dorong Efisiensi Infrastruktur TIK, Menkominfo: Pemerintah Siapkan Kebijakan yang Ramah*.
- Kemp, S. (2022). *Digital 2022: Indonesia*. 15 Februari.
- Khan, A. W., & Pandey, J. (2022). Dark Side Consequences of Cyberchondria: an Empirical Investigation. *Aslib Journal of Information Management*. <https://doi.org/https://doi.org/10.1108/AJIM-08-2021-0222>
- Kose, S., & Murat, M. (2021). Examination of The Relationship Between Smartphone Addiction and Cyberchondria in Adolescents. *Archives of Psychiatric Nursing*, 35(6), 563–570. <https://doi.org/10.1016/j.apnu.2021.08.009>
- Loos, A. (2013). Cyberchondria: Too Much Information for The Health Anxious Patient? *Journal of Consumer Health On the Internet*, 17(4), 439–445.
- Marpaung, J. (2018). Pengaruh Penggunaan Gadget Dalam Kehidupan. *KOPASTA: Jurnal Program Studi Bimbingan Konseling*, 5(2), 55–64. <https://doi.org/10.33373/kop.v5i2.1521>
- Masruroh, A. (2020). *Pengaruh Low Self Esteem Terhadap Cyberchondria Pada Mahasiswa Universitas Negeri Semarang*. Universitas Negeri Semarang.
- Mathes, B. M., Norr, A. M., Allan, N. P., Albanese, B. J., & Schmidt, N. B. (2018). Cyberchondria: Overlap with Health Anxiety and Unique Relations with Impairment, Quality of Life, and Service Utilization. *Psychiatry Research*, 261, 204–211. <https://doi.org/10.1016/j.psychres.2018.01.002>
- McElroy, E., & Shevlin, M. (2014). The Development and Initial Validation of The Cyberchondria Severity Scale (CSS). *Journal of Anxiety Disorders*, 28(2), 259–265.
- McMullan, R. D., Berle, D., Arnáez, S., & Starcevic, V. (2019). The Relationships Between Health Anxiety, Online Health Information Seeking, and Cyberchondria: Systematic Review and Meta-Analysis. *Journal of Affective Disorders*, 245, 0–52.
- Mirzaqon, A., & Purwoko, B. (2018). Studi Kepustakaan Mengenai Landasan Teori dan Praktik Konseling Expressive Writing. *Jurnal BK Unesa*, 8(1), 1–8.
- Newby, J. M., & McElroy, E. (2020). The Impact of Internet-Delivered Cognitive Behavioural Therapy for Health Anxiety on Cyberchondria. *Journal of Anxiety Disorders*, 69(September 2019), 102150. <https://doi.org/10.1016/j.janxdis.2019.102150>
- Permata, A. H., Lenny Kendhawati, & Marisa Fransiska Moeliono. (2021). Hubungan

- Kecemasan Kesehatan dengan Ketakutan terhadap COVID-19 pada Remaja Akhir di Jakarta. *Psyche 165 Journal*, 14(3), 278–283. <https://doi.org/10.35134/jpsy165.v14i3.42>
- Ridwan, M., Suhar, A. M., Ulum, B., & Muhammad, F. (2021). Pentingnya penerapan literature review pada penelitian ilmiah. *Jurnal Masohi*, 2(1), 42–51.
- Shekar, S., & Aravantagi, A. (2021). Cyberchondria and Its Effects on Anxiety during Covid-19 Pandemic. In F. Gabrielli, & F. Irtelli (Eds.), *Anxiety, Uncertainty, and Resilience During the Pandemic Period - Anthropological and Psychological Perspectives*. <https://doi.org/https://doi.org/10.5772/intechopen.98507>
- Starcevic, V., Baggio, S., Berle, D., Khazaal, Y., & Viswasam, K. (2019). Cyberchondria and its Relationships with Related Constructs: a Network Analysis. *Psychiatric Quarterly*, 90(3), 491–505. <https://doi.org/10.1007/s11126-019-09640-5>
- Starcevic, V., & Berle, D. (2013). Cyberchondria: Towards a Better Understanding of Excessive Health-Related Internet use. *Expert Review of Neurotherapeutics*, 13(2), 205–213. <https://doi.org/10.1586/ern.12.162>
- Starcevic, V., Berle, D., & Arnáez, S. (2020). Recent Insights Into Cyberchondria. *Current Psychiatry Reports*, 22(11), 1–8. <https://doi.org/10.1007/s11920-020-01179-8>
- Tyrer, P., Eilenberg, T., Fink, P., Hedman, E., & Tyrer, H. (2016). Health Anxiety: The Silent, Disabling Epidemic. In *BMJ* (Vol. 353). British Medical Journal Publishing Group.
- Ulfatin, N. (2013). *Metode Penelitian Kualitatif di Bidang Pendidikan: Teori dan Aplikasinya*. Fakultas Ilmu Pendidikan Universitas Negeri Malang.
- Varma, R., Das, S., & Singh, T. (2021). Cyberchondria Amidst COVID-19 Pandemic: Challenges and Management Strategies. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsy.2021.618508>
- Vismara, M., Caricasole, V., Starcevic, V., Cinosi, E., Dell'Osso, B., Martinotti, G., & Fineberg, N. A. (2020). Is Cyberchondria a New Transdiagnostic Digital Compulsive Syndrome? A Systematic Review of The Evidence. *Comprehensive Psychiatry*, 99, 152167. <https://doi.org/10.1016/j.comppsy.2020.152167>
- Wendari, W. N., Badrujaman, A., & Sismiati, A. (2016). Profil Permasalahan Siswa Sekolah Menengah Pertama (SMP) Negeri di Kota Bogor. *Insight: Jurnal Bimbingan Dan Konseling*, 5(1), 134–139. <https://doi.org/10.21009/INSIGHT.051.19>