

# This in an electronic reprint of the original article (final draft).

# Please cite the original article:

Haasio, A. (2021). Information seeking behaviour of the socially withdrawn. In O.-L. Madge (ed.), *New trends and challenges in information science and information seeking behaviour* (pp. 23–32). (Lecture notes in networks and systems 193). Springer. https://doi.org/10.1007/978-3-030-68466-2\_3



## Ari Haasio

# Information Seeking Behaviour of the Socially Withdrawn

### **Abstract**

This chapter discusses the information practices among Finnish socially withdrawn youth aka hikikomori. Hikikomori phenomenon is originally Japanese, but there are hikikomoris all over the world. Word *hikikomori* is based on the Japanese word *hikikomorou*, which can be translated as "to be confined inside". Hikikomori is a person who tries to avoid all social contacts.

The theoretical framework is based on Reijo Savolainen's concept of the everyday life information seeking model and Elfreda Chatman's theory of information seeking in the small world. Data consists 6910 discussion board messages, which were collected from Finnish site Hikikomero, a discussion group for socially withdrawn youth.

The results show that peer information is appreciated among the subcultures and people who live in a "small world". Only the information given by the similar others who are also socially withdrawn, is trusted. The chapter introduces also a concept of disnormative information, which is opposite to the majority's values, norms and attitudes. This kind of information is highly respected and sought from the discussion forum.

# Introduction

According to various estimates, there are 500,000 to 1,000,000 socially withdrawn people in Japan called hikikomoris (Tajan, Yukiko & Pionnié-Dax 2016). Some researchers understand that hikikomori phenomenon is caused by the cultural problems in Japanese society about expressing failure, shame and guilt in an acceptable way and partly because of collision of the values of western and traditional Japanese society (Ohashi 2008).

Although the phenomenon originated in Japan, it has been recognized around the world. For example, the phenomenon has been recognized e.g. in Spain (Ovejero et al., 2014) Finland (Haasio, 2015), Italy (Ranieri, 2015), South Korea, India and the USA (Kato et al., 2018; see also Tajan, 2015). It is conceivable that this is also partly the result of a new kind of information society, which increasingly makes it possible to do things without leaving home.

Word *hikikomori* is based on the Japanese word *hikikomorou*, which means "to be confined inside" (Krysinska 2006; Ohashi 2008). The term can signify a person or the phenomenon (Ohashi 2008). Hikikomoris try to avoid all social contacts (Saito 1998; Furlong 2008) and they may have been diagnosed a mental illness, but not necessarily. Kato et al. (2020) have proposed diagnostic criteria based on the following premises: 1) marked social isolation in the person's home, 2) duration of continuous social isolation of at least 6 months and 3) significant functional impairment or distress associated with the social isolation.

Although the phenomenon has often been considered a mental disorder, Tan et al. (2019), for example, have stated that it is a person's deliberate seclusion from mainstream society. Hikikomori phenomenon can also be understood as a choice to isolate from the society and it can be in some cases compared to the hermits of the 19<sup>th</sup> and 20<sup>th</sup> century in countryside. Due to this we can assume that it is a subculture, which has its own features.

Haasio (2015) and Haasio and Naka (2019) have studied the information behavior of socially withdrawn individuals a. k. a. hikikomoris. Their way of life and isolation from the rest of the world makes them a group that represents otherness in relation to the majority, which affects to their information behavior (Haasio 2015). Most of the contacts with other people, if there are any, are done via internet. The web is a central part of hikikomori's life: it provides information, entertainment and makes possible to take care of everyday things (Haasio 2015; Haasio 2018).

Information can be understood as a process of communication based on social context, where information is built (Tuominen & Savolainen 1997). Based on this perception of information, social relationships and environmental factors significantly influence an individual's information behavior. The theoretical framework of this article is based on Reijo Savolainen's (1995) model for way of life and on the theories of information poverty and small world proposed by Elfreda Chatman (1996; 1999). The empirical results and examples are based on Haasio's (2015) dissertation about socially withdrawn hikikomori's information behaviour. For that study 6910 messages from a Finnish Hikikomero discussion forum (http://www.ylilauta.org/hikky) were analysed by using quantitative and qualitative content analysis.

Previous studies of hikikomoris have mostly concentrated to the psychiatric analysis of the phenomenon (e.g. Teo 2013; Kondo et al. 2013; Sarchione et al. 2015; Tajan 2015). In this article

we analyze those special features their information behavior has, what kind of information they trust and in what role is the disnormative information (see Haasio 2015), a. k. a. dark knowledge (see Burnett & Lloyd 2020) in their information behavior.

# Living in a small virtual world

The life of hikikomoris is typically very restricted. When they are trying to avoid all social contacts, they leave their homes only for compelling reasons like for a doctor's appointment and going to a convenience store to get food.

Although in many cases social withdrawal is also associated with mental health problems, it may also be a matter of a person's own choice. Tan et al. (2020) point out that hikikomori can be person's deliberate seclusion from mainstream society.

Hikikomoris have their own subculture, where the internet, games, manga and anime often play a key role. Most of the time is spent in front of a computer playing games and surfing the net. (Haasio 2015.) Many Finnish hikikomoris also admire the Japanese hikikomori-culture (Haasio 2018).

Finnish hikikomoris have described their daily routines in their discussion forum Hikikomero (http://www.ylilauta.fi/hikky). The daily rhythm is different from the traditional one. They wake up after noon and surf at the web or play video games until midnight or later. Zechner and Haasio (2016) have pointed out that satisfying sexual desires and watching anime porn, for example, are part of many people's daily lives. Sexual desires are channeled into the adult entertainment offerings of the internet because there are no social relationships. Loneliness is a typical feature hikikomoris do not have any friends. For many, only parents and siblings are the only social contacts. Many hikikomoris have been bullied at school and loneliness has continued throughout life. (Haasio 2018.) Low social skills and awkwardness or anxiety in social situations is common among the Finnish hikikomori (Kirjavainen & Jalonen 2020). In addition, a low self-esteem is typical, feeling of failure as well as passivity as a hallmark of everyday life (Husu & Välimäki 2017; Haasio & Naka 2019; Kirjavainen & Jalonen 2020). Some hikikomoris even consider a suicide as a solution because of their experience of worthlessness (Yong & Nomura 2019; Haasio & Salminen-Tuomaala 2020).

In Reijo Savolainen's (1995) ELIS-model mastery of life is one of the factors influencing to the way of life. Hikikomoris represent the pessimistic-affective role of the mastery of life. This role

represents "learned helplessness" as Savolainen describes it. He continues: "One does not rely on his or her abilities to solve everyday life problems, but adopts a strategy of avoiding systematic efforts to improve his or her situation. Drifting from day to day and searching for instant pleasures are characteristic of this ideal type of mastery of life." This description fits well to hikikomoris. They do not plan actively their future and most of them are dropouts whose life is drifting from day to day without any ambition or purpose of life. This way of life reflects also to their information behaviour.

Elfreda Chatman's (1991) theory of small world shows that in some groups people are not seeking information actively outside their own life circle. The lower working-class respondents whose information behaviour Chatman analysed, were not active seekers of information outside of their most familiar social milieu. According to Chatman, this is based on the fatalistic attitude of the group under study - no better tomorrow is believed (Chatman 1991). In the same way, hikikomoris live in a "small world" in terms of their information behavior. The starting point is the idea that our social environment and way of life largely determine our information behavior. "Small world" is not so much a term related to socioeconomic deprivation or information poverty, but rather an individual's world of life that describes his activity and contacts in everyday activities (Jaeger & Burnett 2010). Burnett, Besant, and Chatman (2001) also brought up the idea of a virtual "small world" as a forum for information seeking, which is actually used by hikikomoris.

### Information needs of hikikomoris

According to Savolainen (1995) the concept of way of life refers to "order of things", which is based "on the choices that individuals make in everyday life". Values and attitudes, material capital, social capital, cultural and cognitive capital and current life situation are elements of which the way of life is built.

Haasio and Naka (2019) have compared hikikomori's information needs in Finland and Japan. They were very congruent and only some differences were clearly noticeable. In Finland "Economic problems/housing/livelihood" (18,0 %) and "Health and sickness" (15,4 %) were the most common topics of information needs. In Japan two biggest categories were social relations/marriage/family (14,7 %), death (13,2 %). According to them, the differences were due to cultural differences. Although much of the information needs are similar in both Japan and Finland, they are partly

expressed differently. In Finland, the need for information is expressed in clear questions, while in Japan the issue is expressed more indirectly.

The way of life is similar both in Japan and in Finland when it comes to hikikomoris. They live isolated life, spend time surfing in the net and avoid social contacts. Also gaming and reading manga and anime is typical in both countries. The differences can be explained by cultural reasons of the society according to Haasio and Naka (2019). The subculture is similar, but the conventions and manners are different. This causes different kind of information behaviour in similar groups. The way of life explains the information behaviour only partly in this case. The main culture and its values affect to the content of information needed. For example in Finland many hikikomoris live by themselves in rental studio flats and they finance their living by the social welfare. Most Japanese hikikomoris, on the other hand, live with their parents due to the different traditions of society. This explains why Finnish hikikomoris had more livelihood issues. As Japanese youth, on the other hand, move away from their parents after they get married, they again think more about matters related to marriage. In Japan, on the other hand, sex was talked about very subtly, while according to the Scandinavian way, it was discussed very directly in a Finnish discussion forum.

# Peer support and peer information

Peer information and peer support play a significant role in the information acquisition of socially withdrawn hikikomoris. Experts' views are not necessarily trusted, but information is sought from people in similar life situations who have similar problems and similar way of life.

When a virtual community has become an alliance of like-minded people, for example because of the subculture, that unites them; the experience of otherness is similar. As a result, information obtained from individuals who share the same lifestyle, is valued. Peer information is important and much valued. When acquiring peer information, it is important that the person from whom the information is obtained has experienced the same thing.

Elfreda Chatman (1991; 1996; 1999) has underlined that those people sharing the similar kind of a "small world" share similar kind of values and do trust the information they get from the others sharing the physical environment. The same goes for the virtual environment; for example, in discussion groups and other social media communities, virtual space is also a unifying factor from the information seeking perspective. People, who share the same virtual space, do more often trust

to each other's opinions when the forum is targeted to a special group like hikikomoris. (Haasio 2015.)

In addition to peer information, a lot of peer support is also sought from the discussion forum. Peer support requires experience of similar otherness in order to be reliable. Many participants share their own problems, dreams, and fears in discussions. For some the discussion forum is almost the only place where they can anonymously tell their worries and ask some support. Many participants in the discussion forum do not clearly articulate the information need by asking a question. Instead, they talk about their lives and problems, waiting for comments from other members of the discussion group. By gaining peer support from the others at the same kind of life situation, peer support and peer information, information seekers also try to legitimize and accept their own lifestyle. At the same time the person's self-understanding grows and he receives information on an interesting topic even if he does not consciously seek an answer to any individual problem.

People may also participate the discussion by "lurking" the discussions at the forum. They do not necessarily write any posts, but just read them. These messages written by other hikikomoris may reinforce one's own perceptions. At the same time, these messages can bring comfort to difficult moments when a person knows that he is not the only one with similar problems.

I think I am basically a cheerful, warm, social and empathetic person. But the problem is that my dad happens to be a crazy and narcissistic asshole. I still live here with my parents and when I have to listen to him scream and when he teases my mother, I feel down. There are so many bad memories associated with him over the years. This somehow just makes me passivate and even sexual desires disappear completely. The general joy of life disappears completely for a long time. When I was a little bit longer periods of time away from home, I noticed a reversible man, which I was last as a kid. My joy of life keeps me alive with a probable place to study in a whole new city and a whole new fresh start, for me a new opportunity as a person. But for a little while, you should be able to handle this s\*\*t. Please be kind, friends, give me hope.

Reflecting on one's own life situation by telling one's own feelings, is also one way to seek peer support and at the same time an expression of otherness. It is often like an outburst, in which, one's own feeling of anxiety or depression is told on a general level. When the other users read these expressions, they can identify with other conversations. "Lurking" these posts can also be understood as active monitoring (see McKenzie 2003). "Lurkers" are interested in the topic but for some reason they do not want to take part to the discussions.

### Disnormative information

One typical feature in socially withdrawn's information behaviour is the need of disnormative information. This can be explained by the fact that they represent a subculture where the norms and values differ from the ones among the majority of people.

Haasio (2019) has defined disnormative information as follows: "disnormative information is based on the assumption that people have a information need for the kind of information which can be either illegal or encourage illegal activities, be morally questionable in the opinion of the majority, because it stands against majority's values."

	NORMATIVE INFORMATION	DISNORMATIVE INFORMATION
Typical features	Institutionalized Public Complies with the norms and value system of society Based on law, research, generally accepted conventions Conforms to public opinion and consensus Formal	Against public opinion Promotes counterculture Promotes alternative value systems Based on experience, opinions, unaccepted research or pseudo-science Acts as counterforce for consensus "Revolutionary" Informal
Distributors	Officials and authorities Educational institutions The state Municipalities Research institutions The defence force, military institutions	Individuals Different political, religious movements Communities that share the same alternative norms and value system Subcultures and their representatives
Sources	Officials' and authorities' publications Television Books Magazines Specialist sources, such as doctors, etc. Web sources administered by institutions or authorities	Alternative publications Internet communities such as discussion forums & groups Websites whose administrators promote non- consensical norms and views Alternative literature and magazines

Table 1. Typical features, distributors and sources of disnormative information compared to the normative information. Source: Haasio 2015; Haasio 2019. Translation from Finnish by the author.

In Table 1 the typical features, distributors and sources of disnormative and normative information are compared. It is noteworthy that these sources may be as well electronic as printed. Disnormative information is characteristically distributed in subcultures and it promotes alternative values in the society working as a counterforce for concensus.

Disnormative information may rely on pseudoscience. It may also promote subcultures, which may even be illegal (e.g. outlaw bikers, drug addicts). (Haasio 2019.) There is two kinds of disnormative information: 1) information, which is needed to do something against the law and 2) information, which is morally questionable by the majority of people, but is legal (Haasio 2015; Haasio 2019). This kind of information is typical for subcultures and countercultures like drug users (Haasio, Harviainen & Savolainen 2020) and to hikikomoris (Haasio 2015). Otherness and a different way of life create a sense of belonging among hikikomoris in the Finnish Hikikomero discussion forum. It is the basis for knowledge sharing and peer support that is shared within the group.

Disnormative information is culturally and time-bound. In different cultures, different things are taboo depending on time and place. What is acceptable in Western European culture may even be illegal, for example, in Islamic culture. Attitudes towards sexuality issues are a good example of this. In those countries where attitudes are more conservative, seeking information about sexuality issues is clearly a search for disnormative information.

Normative information, on the other hand, is the kind of information, which is generally accepted by the majority of society. For example, In Finland, the use, possession and sale of drugs is criminalized. Normative information is information about the dangers of drugs that is disseminated to the public by the authorities and health professionals. Disnormative information, on the other hand, is information related to drug use, guidance how to use drugs and purchasing them. (Haasio, Harviainen & Savolainen 2020). In those countries where the possession or use of drugs is not criminalized, this kind of information can be understood as normative information.

In the discussion forum some socially withdrawn hikikomoris wanted tips on drug use, which is clearly disnormative information. Hikikomoris acquired non-normative information from their peers, for example, to start taking the prescription drugs they were given by the doctor.

Have you had any use to take Citalopram? I have about 200 tablets in the closet and I I wonder if I should start eating them or not

Any experience about citalopram's withdrawal symptoms, how long does this s\*\*t last?

Experiences of the others were much valuated and decisions were made by the information given of the other discussion board users. There examples show that the information given as answers was peer information and also disnormative information.

Disnormative information is not a new phenomenon, as it has always occurred. With the Internet, its accessibility has become easier and at the same time it has become more visible. Political flyers are an example of disnormative, even revolutionary, material.

When analyzing the essence of dark knowledge Burnett and Lloyd (2020) define it to be "having the potential to marginalise, exclude and isolate and "other" people or communities who accept this type of knowledge. Based on this, it can be stated that some of the information needs of hikikomoris and the information they share in the forum are of such a nature. The question of whether this is disnormative information or dark knowledge requires more conceptual analysis and empirical research. In this case, the phenomenon can be tentatively described by both concepts. For example, the discussions about suicide associated with these concepts at the Hikikomero discussion forum.

# **Conclusions**

Two clearly typical features can be observed in the information behavior of socially withdrawn hikikomoris. Firstly, peer information and peer support are trusted and, for example, in matters of one's own health, the opinions of people who have had the same experience are needed to support decision-making. Authorities may not be trusted in the same way. Secondly, socially withdrawn people often obtain disnormative information, for example, to get social benefits or to discuss the use of illicit drugs.

Way of life affects to the information behaviour of hikikomoris, but when comparing the information behaviour between two culturally very different countries, Finland and Japan, it is remarkable that the main culture's effect to the information behaviour is significant. The influence of cultural features should ne analyzed more carefully in further studies. Especially the subcultures need a closer look when the essence of disnormative information or dark knowledge can be found therefrom.

The information world of socially withdrawn is remarkable limited, because many sources are not available at home. If they stay inside and do not leave their home, e.g. libraries and many other channels cannot be used. The same applies to informal sources. Their main channel to retrieve information is internet. At the same time it is their life's focal point, which is used so much that it

can be understood as an addiction in many cases. Hikikomoris are living in a small virtual world where their information sources and entertainment is focused into a small virtual bubble.

### References

Burnett, G., Besant, M., & Chatman, E. A. (2001). Small worlds: Normative behavior in virtual communities and feminist bookselling. *Journal of the American Society for Information Science and Technology*, 52(7), 536-547.

Burnett, S., & Lloyd, A. (2020). Hidden and forbidden: conceptualising Dark Knowledge. *Journal of Documentation*. https://doi.org/10.1108/JD-12-2019-0234

Chatman, E. A. (1991). "Life in a small world: Applicability of gratification theory to information seeking behavior." Journal of the American Society for Information Science 42 (6), 438–449.

Chatman, E. A. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science*, 47(3), 193-206.

Chatman, E. A. (1999). A theory of life in the round. *Journal of the American Society for Information Science*, 50(3), 207-217.

Haasio, A. (2019). What is Disnormative Information?. *Information and Communication Sciences Research*, 23(1), 9-16. http://icsr.unibuc.ro/pdf/23-haasio.pdf

Haasio, A. 2018. Hikikomorit. Helsinki: Avain.

Haasio, A. (2015). Toiseus, tiedontarpeet ja tiedon jakaminen tietoverkon "pienessä maailmassa": Tutkimus sosiaalisesti vetäytyneiden henkilöiden informaatiokäyttäytymisestä. Diss. Tampere: Tampere University Press. Acta Universitatis Tamperensis 2082. Available http://urn.fi/URN:ISBN:978-951-44- 9878-7. (Summary in English). (Otherness, information needs and information sharing in the "small world" of the Internet: A study of socially withdrawn people's information behavior)

Haasio, A., Harviainen, J. T., & Savolainen, R. (2020). Information needs of drug users on a local dark Web marketplace. *Information Processing & Management*, *57*(2), 102080. https://www.sciencedirect.com/science/article/pii/S0306457319300469 Haasio, A., & Naka, H. (2019). Information needs of the Finnish and Japanese hikikomori: a comparative study. *Qualitative and Quantitative Methods in Libraries*, 8(4), 509-523. http://www.qqml-journal.net/index.php/qqml/article/view/533

Haasio, A. & Salminen-Tuomaala, M. 2020. Suicide motives and protective factors – contributions from a hikikomori discussion board. *Issues in Mental Health Nursing*. https://doi.org/10.1080/01612840.2020.1817209 (accepted 27.8.2020)

Husu, H. M., & Välimäki, V. (2017). Staying inside: social withdrawal of the young, Finnish 'Hikikomori'. *Journal of Youth Studies*, *20*(5), 605-621. https://link.springer.com/chapter/10.1007/978-3-030-57847-3 11

Jaeger, P. T. & Burnett, G.(2010). *Information Worlds. Social context, technology, and information behavior in the Information age of the internet.* New York, London: Routledge.

Kato, TA, Kanba, S, Teo, AR. (2020). Defining pathological social withdrawal: proposed diagnostic criteria for hikikomori. *World Psychiatry 19*: 116–117. https://doi.org/10.1002/wps.20705

Kato, T. A., Kanba, S., & Teo, A. R. (2018). Hikikomori: experience in Japan and international relevance. *World Psychiatry*, 17(1), 105. <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5775123/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5775123/</a>

Kirjavainen, H., & Jalonen, H. (2020, August). The Many Faces of Social Withdrawal in Hikikomori. In *International Conference on Well-Being in the Information Society* (pp. 156-168). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-030-57847-3 11

Kondo, N., Sakai, M., Kuroda, Y., Kiyota, Y., Kitabata, Y., & Kurosawa, M. (2013). General condition of hikikomori (prolonged social withdrawal) in Japan: psychiatric diagnosis and outcome in mental health welfare centres. International Journal of Social Psychiatry, 59(1), 79-86. <a href="https://journals.sagepub.com/doi/pdf/10.1177/0020764011423611?casa\_token=E\_XzujPASiUAAAA:E6PdpGbnjFpIeDmQAfkBsffgoQZ6q-A\_ojc-HlBozXXpUsmwGXEbdidAMEG3xnL0RU7Y0KuiLsNxQ">https://journals.sagepub.com/doi/pdf/10.1177/0020764011423611?casa\_token=E\_XzujPASiUAAAAA:E6PdpGbnjFpIeDmQAfkBsffgoQZ6q-A\_ojc-HlBozXXpUsmwGXEbdidAMEG3xnL0RU7Y0KuiLsNxQ</a>

McKenzie, P.J. (2003). A model of information practices in accounts of everyday life information seeking. Journal of Documentation 59(1), 19-40.

http://publish.uwo.ca/~pmckenzi/McKenzie J.Doc 2003.pdf

Ovejero, S., Caro-Cañizares, I., de León-Martínez, V., & Baca-Garcia, E. (2014). Prolonged social withdrawal disorder: a hikikomori case in Spain. *International Journal of Social Psychiatry*, 60(6), 562-565.

https://journals.sagepub.com/doi/full/10.1177/0020764013504560?casa\_token=kloPu7OyedIAAA

AA:A\_Klq-55lKDpTTZvV9HcuDAY0yyQcRW9oPxetlGoJSMeW3yZYRX2YDbRxfNvliqGF0kp58RjwvzsQ

Ranieri, F. (2015). When social withdrawal in adolescence becomes extreme: the "hikikomori" phenomenon in Italy. *Psychiatria i Psychologia Kliniczna, 15*(3), 148-151.

http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.psjd-48bad80b-fd49-4d52-8d3a-9561d9c712f5/c/Psychiatria3.2015Ranieri Hikikomori.pdf

Sarchione, F., Santacroce, R., Acciavatti, T., Cinosi, E., Lupi, M., & Di Giannantonio, M. (2015). Hikikomori, clinical and psychopathological issues. Res Adv Psychiatry, 2, 21-7.

Savolainen, R. (1995). Everyday life information seeking: approaching information seeking in the context of way of life. *Library & Information Science Research*, 17(3), 259-294

Tajan, N. (2015). Social withdrawal and psychiatry: A comprehensive review of Hikikomori. *Neuropsychiatrie de l'Enfance et de l'Adolescence, 63*(5), 324-331. <a href="https://www.elsevier-masson.com/en/article/991843/iconosup">https://www.elsevier-masson.com/en/article/991843/iconosup</a>

Tajan, N., Yukiko, Y. & Pionnié-Dax, N. 2016. Hikikomori: The Japanese Cabinet Office's 2016 Survey of Acute Social Withdrawal. *The Asian Pacific Journal* 15(5). https://apjjf.org/2017/05/Tajan.html

Tan, M., Lee, W., & Kato, T. (2020). International experience of hikikomori (prolonged social withdrawal) and its relevance to psychiatric research. *BJPsych International*, *1-3*. doi:10.1192/bji.2020.20

Teo, A. R. 2013. Social isolation associated with depression: A case report of hikikomori. International Journal of Social Psychiatry 59(4), 339--341.

Tuominen, K. & Savolainen, R. 1997. Social constructionist approach to the study of information use as discursive action. In: Information Seeking in Context. Proceedings of an International Conference on Research in Information Needs, Seeking and Use in Different Contexts, 14-16 August, 1996 Tampere, Finland. Ed. by Pertti Vakkari & Reijo Savolainen & Brenda Dervin. London (UK): Taylor Graham, 1997, 81-96.

Yong, R., & Nomura, K. (2019). Hikikomori is most associated with interpersonal relationships, followed by suicide risks: a secondary analysis of a national cross-sectional study. Frontiers in psychiatry, 10, 247.

https://www.frontiersin.org/articles/10.3389/fpsyt.2019.00247/full?utm\_source=F-AAE&utm\_medium=EMLF&utm\_campaign=MRK\_969842\_68\_Psychi\_20190423\_arts\_A

Zechner, M. & Haasio, A. (2016). Seksuaalisuus sosiaalisesti vetäytyneiden nuorten verkkopuheessa. Seksologinen aikakauskirja 2(1). Available http://seksologinenseura.fi/index.cfm?sivu=160. (Sexuality of hikikomori in the discussion forum's comments).