

Use of Virtual Communities as Social Support For Families With Children With Autism

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Abstract. The prevalence of Autism Syndrome Disorder (ASD) or autism continues to increase in the world and Indonesia. Social problems that arise are high levels of parental stress due to negative child behavior and environmental stigmatization. The implication of technological developments is the emergence of various virtual communities on social media for various purposes including health communication. The study aims to analyze the use of virtual communities of parents based on member characteristics by applying the Uses and Gratification theory. The study identified differences in communication in the use of virtual communities from mothers who had children with high severity and high-income levels, mothers who had low-severity children with high-income levels, mothers who had children with high severity and low-income levels, and fathers who had children with high severity and high incomes.

Keywords: autism, social support, uses and gratifications theory, virtual community

1 Introduction

The prevalence of Autism Syndrome Disorder (ASD) or called autism continues to increase in the world. One in 59 children has been identified with autism and is reported to occur across all racial, ethnic, and socioeconomic groups [1]. Likewise in Indonesia, although there are no exact figures, based on data from the Central Bureau of Statistics (BPS) with the population of Indonesia and a growth rate of 1.14 percent can be predicted by autism sufferers in Indonesia around 2.4 million people with an increase of 500 people per year [2].

Likewise in Indonesia, although there are no exact figures, based on data from the Central Bureau of Statistics (BPS) with the population of Indonesia and a growth rate of 1.14 percent can be predicted by autism sufferers in Indonesia around 2.4 million people with an increase of 500 people per year. The rapid development of technology and the emergence of various social media as a means of communicating and interacting with the community brings various implications, one of which is the emergence of various virtual communities that have various purposes. Parents can use virtual communities to share with other parents about autism-related matters and their treatment [3], [4].

Previous research on health communication states that the autism community on Twitter and Blogs plays a significant role in providing social support for parents [5]. Research using social

support theory and computer-mediated interpersonal communication reports consistent empirical findings of the role of virtual communities and their effectiveness in providing informational support and emotional support [6]–[8]. Social support for parents of children with autism in virtual communication is similar to support in face-to-face (offline) groups. Member participation is driven by the benefits gained and the increased use of virtual communities as they are less satisfied with face-to-face support [9], [10]. The virtual community on Facebook plays a role for parents of children with autism who seek informational support and emotional support due to being in uncertainty [8]. Although the relative benefits of virtual communities are useful to understand their application [11], It is important to better understand the use of virtual communities related to the activeness of its members in obtaining gratification.

Uses and Gratification (UAG) theory is useful in predicting internet usage [12], [13]. According to the theory of use and gratification, audiences deliberately choose the media and are actively involved to meet their needs. Each individual uses social media differently to meet his or her needs based on their perceptions [13]. Social support for parents of children with autism in virtual communication is similar to support in face-to-face (offline) groups. Member participation is driven by the benefits gained and the increased use of virtual communities as they are less satisfied with face-to-face support [9], [10]. The virtual community on Facebook plays a role for parents of children with autism who seek informational support and emotional support due to being in uncertainty [8]. Although the relative benefits and advantages of a virtual community are useful for understanding its application [11], It is important to better understand the use of virtual communities related to the activeness of its members in obtaining gratification.

WhatsApp is the largest messaging platform worldwide with more than 1 billion users in 180 countries since it was first launched in 2009 [14]. WhatsApp social media ranks second only to Youtube in terms of the largest social media users in Indonesia with a percentage of 84% [15]. WhatsApp platform is an application to send messages that make it easier for users to communicate and meet the basic needs for engagement [16]. Through WhatsApp, application users can share images, send files, and call other users, including videos and/or voice and group calls [14].

Of the many studies on internet use that emphasize active audiences by applying UAG theory, it is still very rare for research to analyze individual involvement and the process of utilizing virtual communities in search of health information. Research that applies UG theory by understanding virtual group participation to gain social support [17]. Health communication research by examining two groups of virtual communities explains there are differences in their utilization [18]. Based on the above exposure, this study will analyze more deeply related to the interactivity of members in utilizing virtual communities, which are related to health, especially autism. The study's goal was to analyze the use of virtual communities as social support for families with autism.

2 Method

The research paradigm used is the constructivism paradigm using virtual ethnographic methods. Virtual ethnographic studies consist of several steps: observing and exploring objects, selecting objects, asking for approval, entering into communities and making observations, selecting categories of analysis, continuing observations, analyzing data with theoretical backgrounds, and creating narratives. Based on guidelines, researchers chose WhatsApp Group (WAG)

"Special Child" which consists of parents who have autism because it is relevant, active, interactive, substantial, heterogeneous, and data-rich [19]. WAG has 227 members (data until December 30, 2020) who come from all over Indonesia and even abroad. The community consists of mothers or fathers who have children with autism aged 2 to 18 years.

Researchers apply data collection techniques or methods using observation, in-depth interviews, and documentation. Researchers conducted text analysis on THE WAG from January to December 2020 to understand the amount of interactivity across various characteristics, relationships, and member participation in the communication process [20]. In-depth interviews are conducted by asking various questions related to the research theme to ten parents and an expert. Parents who became research informants were selected purposively based on predetermined criteria, namely the severity of the child's disorder, income level, and gender. WAG members who became research informants were selected purposive sampling with different characteristics: severity of the disorder, income level, and gender. Low-income level (income less than 4 million / month), and high-income level (income above 4 million / month). The severity of the disorder varies from mild (high function autism) to severe (low function autism) which is usually characterized by an inability to speak (non-verbal). Researchers selected members taking into account gender, the severity of the disorder, and income level to reflect user demographics. The informant consists of 10 parents (8 women and 2 men) and an expert (GH). The number of informants of 11 people is considered sufficient to meet research questions following the purpose of the study. Interviews with parents to understand the motivation of joining and utilizing virtual communities as social support, while interviews with experts aim to understand their motivation to join the community. Face-to-face interviews are conducted in the Jabodetabek region, while outside Jabodetabek is conducted through zoom applications or Whatsapp calls. The community observation time runs from January to December 2020, while the interviews are conducted from March to July 2020. All interviews last about 45 to 60 minutes and are recorded with audio in addition to being recorded live. The study was conducted from January to December 2020. Virtual community members were recorded as many as 221 in December 2020. The observation period is from January 21, 2020, to December 31, 2020. During that period there were 116,238 chats (statements) observed and analyzed.

Data analysis aimed at answering research questions is carried out while the study is ongoing, thus opening up opportunities to give birth to follow-up questions, and spontaneous observation without having to be bound by space and time at the time of the study. Furthermore, the collected data is analyzed using analytical techniques [21] using the help of Nvivo 12 plus for coding and categorizing observational data and interview transcripts.

3 Results and Discussions

Interactivity is the degree to which members in a communication program have control over communication and can exchange roles in their shared discourse or it can be said that social interactions involve message-based actions and reactions [13]. Based on the analysis of the texts it can be explained that the exchange of information occurs throughout the interactions in virtual communities and can be grouped in two forms, namely: interaction between members and experts. WAG interactivity centers on the support of information that is always accompanied by emotional support. This is in line with previous research that identified informational support and emotional support in virtual communities [3], [8] [10], [24]. The study findings show that

social support that arises in the community boils down to information support that is divided into two things, including (1) sharing problems and (2) sharing solutions. Parents share problems with unlocking personal identities, child diagnoses, child behavior (hyperactivity, tantrums, no eye contact, not being able to speak, which are characteristics of children with autism), and experiences when caring for children with autism. Sharing solutions is dominated by experts who socialize early intervention in the form of a traditional diet of broth, vegetables, and meat (broth) accompanied by therapy and parenting. Information from experts who focus on member issues is an important finding and provides satisfaction to members, while other members provide information based on their experiences caring for children with autism or their opinions. Information about the kalsada diet is provided by other parents who have applied kalsada by reposting expert posts.

The emotional support found in the study was divided into three: (1) a sense of solidarity, (2) appreciation, and (3) motivation. Solidarity includes empathy, a sense of brotherhood, praying for each other, and respect. Appreciation consists of: giving appreciation and praise, while motivation consists of strengthening, sharing experiences, building optimism and hope, and spirit which is a modification of the types of emotional support grouped as overcoming isolation, sharing experience, building self-esteem, and empathizing [23].

The study's findings revealed that virtual communities that use the internet allow individuals with a variety of characteristics to utilize media according to their needs. This is in line with the assumption of Levy & Windahl (1984) in [24] Different individuals will have different needs/actions. WAG members actively exchange information to find ways to deal with or care for children with autism. Member interactivity lies in the needs that connect them with satisfaction (gratification) so that the purpose or media content they share illustrates that need to achieve the goal.

The use of a diverse WAG is related to specific member characteristics. Different child diagnoses cause differences in an individual's communication needs and consequently, there are differences in the content of the messages they share and require different messages in providing satisfaction. Different income levels also cause differences in information needs, resulting in inequality in generating messages, as well as gender. Interactivity in the use of different WANs based on characteristics is spelled out in the following discussion.

3.1 WAG Interactivity Based on Differences in Severity of Child Disorders in Mothers with High Incomes

Children with high severity of the disorder have more challenging behaviors compared to low severity. High severity is characterized by the child's inability to speak, so the child is unable to communicate their discomfort and desires. As a result, the child's emotions become uncontrollable (tantrums). The mother as the child's primary caregiver and considered the most responsible in the development of the child is the one who feels the most stress. In some cases, the mother is often the target of the child's anger and sometimes loses control by venting emotions in the child. The condition motivates mothers who have children with high severity and high income to seek more information about the disorder (disease) and efforts to achieve healing, not on anything else. Mothers who have children with high severity of the disorder are more likely to tell of the child's negative behavior problems compared to mothers who have children who have low levels of the disorder. They also worry about a child's future, especially when they no longer exist in the world. By following the virtual community, they hope to get input from experts and other parents who have successfully educated children with autism.

Mothers who have children with autism worry about their child's future independence, especially when they are gone. This is in line with research that parents are concerned about their child's safety in the future, especially when they can no longer afford to care for their children [25]. Parents' concerns are conveyed in the following interview footage.

I worry about my autistic child at a time when I am not there, my child is not able to be independent, who wants to take care of them later, so I still try to be full of energy so that this child can recover. In this group, I had a lot of discussions with Mrs. Grace and other mothers.

(Interview, FS March 4, 2020)

While mothers who have children with low severity of the disorder, high-income levels in addition to seeking information to eliminate the disorder, tend to have the motivation to seek information about their child's development because they are not too worried about the disorder in their child. Mothers with low-disordered children have hopes that their children can attend public schools with shadow teachers, but to be able to attend school in public places parents face various challenges because of the child's negative behavior. Many public schools reject children with autism disorders because they interfere with other students or other reasons. Likewise, the search for inclusion schools is not an easy thing for parents. Hope You can get the right inclusion education and talent development so that children with autism can grow optimally, although for this you have to spend a considerable amount of money. For this reason, you need to join a virtual community to discuss with other parents who are experienced in raising children with autism. This is in line with research that states that education and talent development for parents who have children with autism is important, although it requires a very expensive education to prepare for the future of children [26]. Differences in the information sought on Mothers with differences in the severity of the disorder in the virtual community are presented in Figure 1.

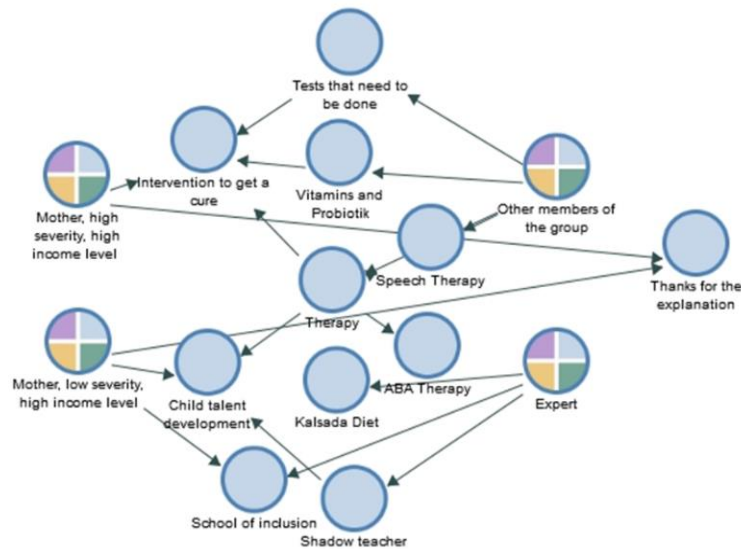


Fig. 1. Interactivity Based on Differences in the Severity of Child Disorders in Mothers Who Have High Income Levels

The information that mothers with high severity are a safe intervention (without side effects) to achieve recovery. The response from other parents who have experienced by telling various tests that have been done to detect disorders in children as recommended by the doctor of growth and development. These tests cost a lot of money and are challenging procedures. Medications are useful for eliminating tantrums and keeping children calm, but only temporary. Therefore, mothers worry about the long-term effects of chemical use and are constantly looking for information to eliminate the disorder in the child. Information from experts in the virtual community about treatment for children with autism with a traditional diet with high nutrition with basic ingredients broth, vegetables, and meat (abbreviated as broth). Experts give advice and ideas in the group by stating that the Calzada diet is believed to eliminate distractions (concealing the disorder).

13/03/2020, 14:54- GH. Human growth has stages, as do children with autism. The foundation of the process of building ability until it reaches the most complex stage is nutrition. The diagnosis of autism results in the growth process of the child. Parents should provide the best nutrition for autistic children who can improve their development. Natural nutrients can quickly correct digestive disorders and are safe. Broth, vegetables, and meat (kalsada) are natural ingredients containing minerals and vitamins that the body needs, especially the brain. These materials are available, cheap, and accessible. In this group, there were very noticeable changes in the ananda with the KALSADA diet (without rice plus without other therapies). I've handled over 1000 children, only before[..] Just an idea, the advice might help. 🙏

The expression of satisfaction of mothers who have children with high severity of disorders and high income is in the quality information that experts convey about a safe diet and can reduce autism disorder. Likewise, mothers with low-severity disorders are satisfied with kalsada dietary information that can accelerate the development of children with autism, plus information about school inclusion, shadow teachers in schools, and the development of autistic children's talents.

In addition to information from experts, WAG members who have implemented the kalsada diet repost expert information and share their experiences. Stories about the condition of children with high impairments and showing significant development after applying the "kalsada" diet are a motivation for members to implement the diet. Community members also provide emotional support by showing a sense of solidarity and appreciation when they embark on a diet, in line with the statement that emotional support always accompanies informational support [18]. The expectation of community use is ultimately determined by quality information and emotional support gained from virtual communities. Like the expression of a mother.

*14/06/2020, 13:53-EN: What excites me is the information from @Ai Grace, stories from mothers about the development of children's focus. And indeed everything discussed here is by Dante's characteristics and makes sense about food and others... *Parents in the educated group* will be more "sane" and calm in the face of special children. More feel that not alone because you can hear the experience of the parents who both have special children and when the case is the same. You can find solutions by reading experiences from other parents.*

3.2 WAG Interactivity Based on Differences in Income Levels in Mothers Who Have Children With Autism with High Severity of Disorders

Families of children with autism are faced with the problem of cost, considering the cost of child care autism is quite expensive. Children with autism cost a lot for various things such as consultations with a growth and development doctor or psychologist, therapy, tests to be undergone, medications, and supplements [25]. However, some parents have constraints in terms of resources, so some of them can not routinely consult their children with a growth and development doctor or therapy. The therapy needed in child care poses financial problems in the family. In some cases, some mothers have to reduce the frequency of therapy a child needs before the Covid-19 pandemic due to financial constraints. This is in line with research that states that financial problems in parents who have children with autism significantly influence them to make visits to professionals as an effort to make medical interventions such as getting therapy and treatment advice [27]. Even some working mothers actually have to decide to stop working to focus on caring for their children, even though it is not the right choice because they have no other choice, as the expression in the interview with MG follows.

I decided to stop working to focus on caring for children, even though my husband's income was not fixed. So right now I have a financial problem with therapy, consulting a doctor. Hopefully, by joining this group there is a way out.
 (Interview, MG 26 April 2020)

Some economic helplessness does not allow them to routinely consult a growth and development doctor or perform various recommended tests. While mothers whose families have high incomes have no problem in terms of care costs. So it can be stated that mothers who have children with high severity and low-income levels tend to seek information for the recovery of children at affordable costs. Differences in the utilization of virtual communities based on differences in income levels are visualized in Figure 2.

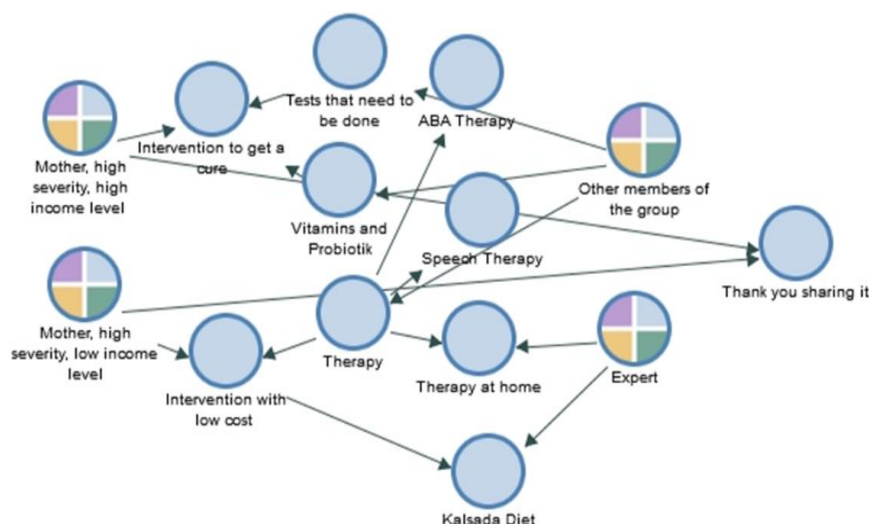


Fig. 2. Interactivity Based on Differences in Income Levels in Mothers Who Have Children With Autism With High Severity of The Disorder

From Figure 2 it can be explained that mothers who have children with high levels of disorders and high-income levels are looking for information to eliminate the disorder or achieve healing in any way without being constrained by resources. They have regularly consulted and obtained a lot of information from doctors or other professionals. Efforts taken to achieve recovery such as undergoing tests recommended by doctors, vitamins for the brain, drugs consumed, and therapies that have been done for children with autism. However, such efforts have not shown significant progress. Information in the group such as tests that need to be done, therapy to support the child's healing, and expensive supplements certainly get a response from parents who have tried. While mothers who have children with autism with high disorders and low-income levels do not have the resources to undergo treatment with autism.

05/04/2020, 15:25 - AM: If the healing packages my supplements nyerah deh. Not strong in price.

Experts inform the kalsada diet that provides the best nutrition for children with autism derived from meat and vegetables that are easily available (available) at low prices (affordable). Kalsada diet is believed to reduce disorders in 2x24 hours able to provide satisfaction both to parents who have limited resources and parents who have high incomes. To accelerate the elimination of disorders, intervention with diet accompanied by therapy at home by involving children in daily activities according to their age can provide effects for mothers who are constrained by costs. An example of one of the messages that experts share in a group.

12/03/2020, 09:50- Ai Grace: Why is KALSADA so helpful when access to therapy or funds is so limited? In every place where you live there must be materials needed. The basic principle of KALSADA is to make it easier for parents to provide the best nutrition for ananda because meat/bones and vegetables must be available. Activities at home can begin to be taught and involve children according to their age is a form of therapy that can increase the strength of the child's muscles such as learning body hygiene: bathing, brushing teeth, cleaning the bed, changing clothes; help parents: take out the trash, lift clotheslines, fold clothes; sports: bicycle, swimming, running, [..]

05/04/2020, 18:23 - GH: Related to rotation, ideally a different type of vegetables and meat every day. but... Again we return to the traditional principle that is reachable and affordable. If possible ananda can be given meat & vegetable that is easy / can be obtained & affordable & rotated every day... but if the difficulty, if doing broth the important thing is to keep the broth-meat-vegetable

Messages that motivate mothers by telling their experiences after applying kalsada such as:

08/64/2020, 14:21 – AM: It is better to diet and therapy only", "Yes it is better to use natural ways than drugs because the most noticeable changes are only therapy and diet". "Parents are the best therapists" I used to try all kinds of expensive tests, with the kalsada diet even easier to trace allergies, "Thank God Ahnaf tomorrow 2 months, significant changes that I feel."

In addition to information support, mothers who have children with high severity and low-income levels have a higher sense of belonging in the community because they need higher problem solving, so tend to develop closer relationships with other members. They ask more

questions and develop connections with other members to share experiences and find healing solutions. The sense of solidarity and brotherhood shown by other members by responding to their questions can create satisfaction in them. They also show a desire to maintain relationships within the group and create a sense of continuing obligation to help other members. This is in line with findings that reveal the importance of information in WAGs on the provision of emotional support. [18]. Although only in cyberspace, the interactivity and intensity of two-way communication built can be a reinforcement for parents [28] as well as sources of information when in need of specific information related to the health of children [29].

Expressions of gratitude that are sometimes accompanied by emoticons that are indicators in satisfaction such as Expressions of gratitude that are sometimes accompanied by emoticons that are indicators in satisfaction such as.

"Thank you for the knowledge @ GH... 🌸🌸", "Thank you GH for giving her enlightenment to parents 🙏🙏", this group is like a new family"; "I don't feel alone", "Fun group".

3.3 WAG Interactivity Based on Gender Differences with High Severity of Disorders and High Income

Striking differences were observed in the content of messages shared by men (fathers) and women (mothers). Because of the role of women (mothers) who are responsible for household affairs and household regulators [30], The person responsible for caring for the child with autism in the family is the mother. Therefore, the level of anxiety and stress of the mother is greater than that of men (fathers). Mothers are the most eager to find information related to child healing efforts than fathers. Women (mothers) share more messages or comments than fathers, supporting findings that explain women's participation in online communities is higher in interpersonal communication [31].

Mothers are more active in sharing messages, exchanging information, and exchanging experiences in virtual communities than fathers. A finding is consistent with a report on virtual communities [17]. Higher interactivity and involvement of women in virtual communities suggests that women need more information support and emotional support. In addition to needing more support, they also provide informational support and emotional support to fellow members of the community. Men who have children with high severity disorders and high incomes focus on information, while women with similar characteristics in addition to focusing on information support are also on emotional support. This is in line with research on virtual communities of ovarian sufferers that also focus on emotional support, in addition to seeking information about health [32]. Women's tendency to provide more expressively expressed emotional support in the group, while men provided very little emotional support. Consistent with research that states that women provide a lot of emotionally focused support while men tend to be low [33]. She also explained that women are more confrontational in conflict than men.

Women complain more about negative child behavior and stigmatization of society, while men never talk about stigmatization, they only focus on negative child behavior. Mothers complain of stigma in children with autism that cannot be erased by the progress of information, such as the following mother's expression.

Although mothers are the most actively seeking parents seeking the information as a way to understand care delivery, given the context women are primary caregivers. However, to

implement an intervention must get the consent of the couple and have the support of all family members. Various cases in the community regarding the distrust of the couple (father) to the information obtained from the couple (wife) related to the intervention that will be applied to the child. Fathers worry that their children will be malnourished if they are not given milk and rice as a source of nutrients and carbohydrates. To get optimal development, families must have similar perceptions about interventions in children with autism. Like the following expert statement.

31/01/2020, 20:35 - GH: How can you be more compact in parenting, huh? 😊 because if the food is not suitable until it falls into the hands of children, the potential after-effects often bother the mother. 😊. There are so many mothers that I know who get attacked by their children when there is a negative reaction 😊. Hopefully, it will be useful and strengthen many mothers in this group if we discuss it... The more compact I family, especially parents, surely the child will be faster development.

The mother's story about the obstacles faced to start an intervention in the group commented on other members by telling the same experience and providing solutions to invite couples to join the group. The goal is for couples to get information directly from experts or read stories from other members about the development of children with autism after applying the diet. Like the following expert statement.

19/06/2020, 15:21- "Just like me Mom, if you don't understand us as tight, she said I can understand, if you can understand, after seeing the development of children now even he who always supports my pass down diet".

The findings hint that offline support is primarily an important partner in the child's dietary decision-making process, although parenting duties are the mother's responsibility. According to a mother, encouragement, and support from the husband (partner) is needed considering that early intervention needs to be done as soon as possible before the child grows older. He further stated that starting a diet is the best option for parents for child development, so husbands also need to get information directly from sources. This condition is expressed by a mother in the following statement.

A little experience in the past my husband also did not support this kalsada diet at all. So every time I explained he ask continued until finally, I felt cornered. I'm kesel, and he doesn't have a satisfactory answer. Finally, I asked him to be invited to the group for his ask about the kalsada diet. After he was satisfied with the answers of experts and other members who had applied and seen his development now, he was strictly concerned about his son's diet.

(Interview ID, 11 Juni 2020)

Furthermore, fathers who have children with high severity of impairment and high-income levels have the motivation to take part in the search for information support, so are willing to join the community. Visualization of WAG interactivity based on gender differences can be seen in Figure 3.

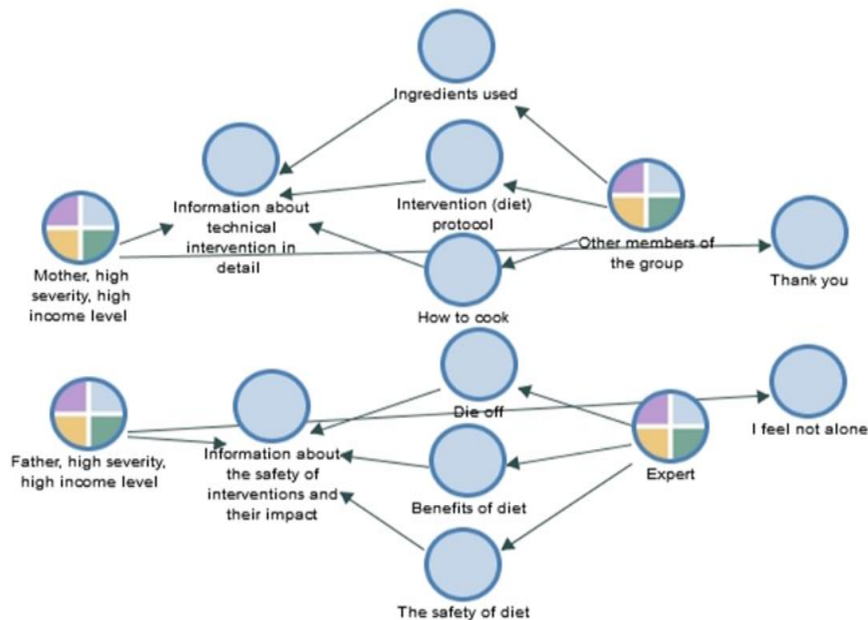


Fig. 3. Interactivity of WAEs based on gender differences with high severity of impairment and high income levels

From the picture above it can be explained that there is a fundamental difference in the messages shared or searched between mother and father on the WAG. The mother focused on finding information related to autism and handling it until technical matters on the application of the kalsada diet in detail, while the father was more looking for information that is argumentative (rational) and not detailed. Information that provides a satisfaction effect on men is dietary safety, differences in interventions at the age stage, the negative impact of diet on children, and the benefits of the diet. While the information that gives a satisfaction effect on the mother such as dietary protocols, presentation, elimination process, food rotation, how to overcome die-off (positive impact but looks like a negative). Expert information that strengthens the support of the application of diet for mothers such as the following explanation.

19/06/2020, 16:24 GH: This diet is safe because it is natural, so it cannot be made specific recipes such as how much the consumption of the broth, vegetables, meat. Now lies the difference between the needs of 1 ananda and the other ananda. How to adopt KALSADA? Portions are adjusted to the needs of Ananda, vegetables/meat rotated & eliminated according to the reaction of the body. Disorders experienced by ananda with the diagnosis of autism, motor-sensory, late speech, learning disorders, all contained in the central nervous system (brain). I still suggest regulating a diet that nourishes the brain [..].

Community members who have adopted the kalsada diet also share their experiences and their child's development, such as examples of the following messages.

22/06/2020, 09:13 HL: My son used to see the doctor often because of his asthma, now never to the doctor because it rarely recurs [..]

A variety of information from experts and community members can give a satisfactory effect on both father and mother. Messages shared in the group such as: "thank you for sharing", "May the special child in this group all grow quickly", "It is getting clearer, there is no doubt" is an expression (indicator) of satisfaction for the information support and emotional support provided.

4 Conclusion

The study identified differences in WAG use based on the severity of the disorder, income level, and gender to obtain satisfaction. Mothers who have children with high severity and high-income levels tend to seek information about the cure of children with autism, not on anything else, while mothers who have low-severity children with high incomes tend to seek information about child development because they are less concerned about the child's condition. Mothers who have high-severity children with low incomes tend to seek information about healing at affordable costs, while mothers who have children with high severity of impairment and high-income levels tend to seek a variety of child healing information (tests, therapies, vitamins, diet) without being constrained by costs. Women (mothers) who have high-severity autistic children tend to be satisfied with the information they have.

5 Suggestion

The high exchange of information related to autism disorder in WAGs emphasizes the importance of virtual communities in the dissemination of health information. Information support in the community is important for coping with autism disorder and emotional support can lower parental stress. The results revealed that differences in the use of virtual communities based on member characteristics imply that, in packaging messages, it is necessary to pay attention to audience characteristics related to health communication. For example, members of high-income disorders go forward focused on messages about interventions that provide healing at affordable cost, while men's forward-order messages focus on rational things to provide more satisfaction.

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