

# Social Media Platform Website for Autism People

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**Abstract.** Mental diseases are serious problems nowadays, autism is one of the most common mental diseases. As we are living in a fast paced society, people are busy with working and provide support to their families and friends, mental diseases are easy to be neglected. The objective of this article is to explain how to develop a good social media platform for the people with autism. This article includes the methods of observation, interview, and questionnaire. The first step is to observe and interview a real person who is diagnosed to moderate autism. Next, this work will find out 50 potential autistic people by questionnaire 1, then there are 5 questions in questionnaire 2, and will be given to potential people with autism to answer. After that, the article will discuss the results, and giving possible solutions. This article will provide help for people who are interested in developing an online social platform for people with autism.

**Keywords:** Autism; Break Down; Registration; Security.

## 1. Introduction

We are living in the age of information, there are 4.95 billion internet users which is 62.5% of the total population in 2022 [1]. The internet brings us many benefits, for example, connectivity, communication, sharing, and more. However, there is a group of people who suffer from using the internet, especially social media, in this fast-paced society - people with autism. According to the team at Elemetry, *“Worldwide, roughly 1 in 160 people is thought to have autism. This number is likely much higher, however, as there is limited data available from low- and middle-income countries.”* [2]. Also, 79.6% of adults with autism spectrum disorders (ASD) use social networking sites (SNS), and the main purpose is social connection [3]. Although there are some benefits for autistic people using social media including safety, better opportunities to make friends, some risks still should not be neglected. First of all, Children with autism often have a hard time determining when people are being unkind to them. That is to say, autistic children may face online bullying, but they are not aware of it. Secondly, there are tons of scammers on social media platforms. Because people with autism usually lack social skills compared to the normal people, they might be easier to get fraud. Also, autistic people have a higher risk of addiction to addicted social media [4]. Therefore, social media could lead to the problem that people with autism spend too much time on the internet and avoid doing social events in real life. There are more problems when autistic people use social media, this article will be dedicated to outlining and explaining an online community especially for the group of people with autism to make friends, share their interests and more.

One of the typical symptoms of autism is being upset by relatively minor changes [5]. Therefore, autistic people could be easily influenced by other people’s comments in social media. Also, People with autism could be sensitive about colours, *“Sensitivity to colours and colour contrast is another visual problem for some autistic people.”* [6]. However, some social media platforms are using Full Intensity Colours (FIC), like light red or light yellow. As well, another feature of autism is noticing small details, patterns, smells or sounds that others do not [7]. Even for some popular social media websites and apps, they are not fully detail oriented. For example, some fake or sexually implication advertisement could be found in their website. Other than that, autistic people always have a very keen interest in certain subjects or activities. In the modern social media platform, there are usually too many irrelevant contents in the same page, this could be a good thing as it will attract more different people. However, the problem of lack of consistency may cause people with autism to feel uncomfortable.

This article will describe how to successfully create an online social platform, and guide people who are interested in building it. Next, this article will use the methods of observation, interview, and questionnaire to discuss what problems that existing social media platforms have. After that, this article will provide possible solutions for such problems by researching and analyzing.

## **2. Method**

### **2.1 Observation and Interview**

To fully understand what causes people with autism to have troubles when they use current social media, the author visited and talked to a person who is the author's friend and high school classmate. This person has been diagnosed as having moderate autism. He registered an account on weibo which is the most popular social media. The different platforms have different registration processes. However, after the author watched the whole process of registration and using the platform. There are some problems that could be found in most social media platform:

#### **2.1.1 Registration**

The registration process could be too long; people may lose their patience especially when they have mental diseases. Also, the risk of leaking personal information should never be neglected.

#### **2.1.2 Buttons**

Some buttons use the colour of light red, it is understandable that light colour is used to draw people's attention, but it is annoying for the people with autism as they are very sensitive to colour.

#### **2.1.3 Recommended Accounts and Advertisement**

There are recommended accounts/bloggers who paid for the platform, sometimes there could be even multiple pages, it is disturbing for most people. Furthermore, Autistic people are afraid to say no even on the internet, so the test taker followed most recommended accounts/bloggers, which lead to a problem that his homepage is full of the content that he was not interested in. Also, as people with autism usually have a hard time saying no to others, the advertisement in the platform will also be a problem for them. Advertisement is a necessary income for platforms, but there are too many advertisements to mislead users especially for the people who lack social skills.

#### **2.1.4 Fake Accounts**

In order to "enhance" user experience, some platforms have fake accounts to say hi to the new users. Those accounts use real people's profile photos and talk like a real person. Most people can distinguish those accounts that are not used by real people and ignore them. However, it could be confusing for people with autism as they are not communicating with people regularly.

There are more troubles when autistic people use current social media platforms, this article will discuss more on this part, and provide possible solutions.

## **2.2 Questionnaire**

### **2.2.1 First Questionnaire (Finding People with Autism Online)**

After analysed the behaviour and mentality of people with autism, I designed the first questionnaire to find potential autistic people, there are 8 multiple choice questions with choice of "Never - 0, Rarely - 1, Sometimes - 2, Often - 3, Very Often - 4"

If the total score is higher than 16 pts, the tester will be considered as potential autistic people. 50 testers will be selected, and I will give them the second questionnaire and cash award when they complete.

### 2.2.2 Second Questionnaire (Finding the Problems when Potential Autistic People using Current Social Media Platform)

1. Do you use any social media platforms? If yes, please go to the next question, otherwise please quit the questionnaire.
2. What current social media platform are you using mostly? How often? Will you recommend it to others?
3. Have you met any problems in the registration step?
4. What things might confuse you when you use it early?
5. What things do you think should be changed/improved even after you use it for a long time?

## 3. Discussion

We begin with the registration stage, 70% of testers met problems, mostly the process is too long, worried about personal information leaking. To improve the user experience, there are six steps that we could follow:

### 3.1 Break Down the Steps

In the questionnaire, 25/50 people complained that they usually take more than 10 mins to finish registration, when they are asked an acceptable time to finish the registration, most people think around 5 mins is appropriate. Therefore, we should minimise the number of steps, and try to let users always click instead of typing.

Before posting the platform online, ask your friends or families to test the procedure, and hear their feedback. Also, make sure client's contact information is easy to be collected, getting feedback from real clients is the best way to improve the website.

### 3.2 Enable Calendar Invites and Reminder

As we discussed before, people with autism are more sensitive than normal people. Missing an important meeting will make them feel very frustrated. So, the function of reminder is necessary, and enabling calendar invites can save client's time to set the reminder on their own.

### 3.3 Talk About Your Sign-Up Process

Around half of testers (24/50) think some of the sign-up process is too long and complicated to understand. Explain the process of sign-up using text, flow chart or pictures to make sure the clients fully understand the whole process.

### 3.4 Security is Paramount

More than 80% of testers (42/50) worry about the security of payment when they use a new platform. It is important to use a trustworthy provider to maintain the payments. Safety is the most important thing in a virtual product, knowing your provider well is crucial for both you and clients [8].

Also, colours are sometimes neglected in some current social media platforms. Around 60% testers (31/50) think the colours of some parts are too light or colour collocation should be better. "*Studies have revealed that 85% of the children in this spectrum perceive colours more intensely in comparison to children displaying normal development.*" [9]. Therefore, instead of lighting colours, duller colours with white and grey undertones are recommended.

At the same time, pay more attention to the colour collocation. Using the tool of "Colour Safe" to make sure the ratio does not below 3.0 to get a good combination of colours.

Next, over 80% (41/50) of testers found many ads to be annoying. As well, about 35% (17/50) of testers claimed that we got fraud by online advertisements. Therefore, the provider should take off all unnecessary steps especially in the early stage of the platform. That is to say, you have to give up

some income including advertisement and paid recommended users, which could keep the platform cleaner. Based on the recent research, around 74% users think that there are too many ads. This number becomes 78% for the users at age of 35+ [10].

Also, few testers (10/50) reported that auto messages could be confusing for them. It is good to use robots to welcome and guide new users. However, the website should clearly state which accounts are used by real people, and which accounts are robots. As well, friendly and efficient are two keys to make successful auto replies to robots. There are 30 auto reply message examples which cover almost every occasion.

There are more things that we can do to improve user experience, especially for the people with autism, for example, providing all time real person customer services, simplifying the platform content, and more.

#### 4. Conclusion

As we are living in a fast-paced society, people and platforms always only focus on the majority's needs. However, mental problems become more and more common, especially in the young generation. According to the latest UN data, around one billion people suffer from mental illnesses worldwide. Among all mental illnesses, autism is the most common one. For people who have autism, it is not easy to do regular social activities in real life. Therefore, for this group of people, online social platforms/communities are a good way to share their feelings, make friends, and more. However, as we mentioned above, there are some problems when people with autism use the current social media platform. In this article, we have used the method of interview, observation, and questionnaire to find out autistic people's needs in the online social platform, and how to improve their experience.

Simplifying registration step, using better colour collocation, removing advertisements, and providing better auto reply by robots are things that designers should be considered in the future.

#### References

- [1] Kemp, S. (2022, January 26). Digital 2022: Global Overview Report - DataReportal – Global Digital Insights. from Digital 2022: Global Overview Report -- DataReportal – Global Digital Insights.
- [2] TEAM AT ELEMYY (2022, June 8). Autism Statistics & Rates in 2022 from Autism Statistics & Rates in 2022 (elemy.com).
- [3] Micah O.Mazurek (2013, March 14). Social media use among adults with autism spectrum disorders from Social media use among adults with autism spectrum disorders - ScienceDirect.
- [4] Patrick Sims (2017, May 3). Autism and the internet: risks and benefits from Autism and the internet: risks and benefits.
- [5] Ada's Medical Knowledge Team (2022, September 21) Signs of Autism from Signs of autism | Ada.
- [6] Olga Bogdashina (2015, May 27) Sensory Intolerance in Autism from Sensory Intolerance in Autism - Integrated Treatment Services.
- [7] Rachel Andersen (2022, August 8) Mild Autism in Adults: Can You Really Be "Mildly Autistic"? from Mild Autism in Adults: Can You Really Be "Mildly Autistic"? - Autism Parenting Magazine.
- [8] Sinead (2021, December 28) 6 Steps to Simplify the Registration Process from 6 Steps to Simplify the Registration Process | OfferingTree.
- [9] Renk Etkisi (2017) THE USE OF COLOUR IN BEHAVIOURAL DISORDERS from Renk Etkisi | The Effect of Color | The Use of Color in Behavioral Disorders.
- [10] Jon Gitlin (2022) 74% of people are tired of social media ads--but they're effective from: 74% of people are tired of social media ads--but they're effective | SurveyMonkey.