

# Failure of Asperger's Syndrome Management as a Result of Misdiagnosis

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**Abstract:** *Misdiagnosis by physicians of the various diseases and disorders is a critical issue and may lead to failure of the management; since it could be life threatening. Moreover, it could have a great impact on the social and economic life as a result of misunderstanding by community (Atwood, 2007). Asperger syndrome is one of those disorders that fall under the spectrum of overlapping disorders (Atwood, 2006). Asperger's syndrome (AS) is one of those disorders that falls under the spectrum of overlapping disorders. AS is a behavioral disorder characterized by difficulties in communication and misunderstanding of non-verbal feelings. AS patient believes everything literally; and actually, act on it literally. The scientific community has had a very difficult time in accepting Asperger's syndrome as being a distinct disorder. What was worse than the community's rejection, it was the fact that although many neurologists and psychologists believed that Asperger's syndrome is a different form of Autism, they are treating both disorders using the same programs and medications. American Psychiatric Association (APA) classified AS twice; the first classification confirmed that AS falls under Autism classification. Thereafter second classification was approved in the fourth Diagnostic and Statistical Manual of Mental Disorders (DSM-4) and AS was called Autism Spectrum Disorder (ASD). Recently High Function Autism (HFA) has become the dominant diagnosis for AS according to the fifth Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Depending on the opinions of different specialists (neurologists as well as psychiatrists), there has been confusion about classifying AS as an independent disease. This search has concentrated on conducting a clinical work in Benghazi to clarify the confusion in diagnosis between Autism and AS. Moreover, it sets out to evaluate if the research samples assume that Asperger Syndrome can be classified as a type of Autism, High Functioning Autism or an independent syndrome. In this study, data was collected from questionnaires and the sample consisted of group of neurologists, psychiatrists, Psychologists, who working in Benghazi/ Libya. The outcome of the analysis revealed that there are obvious different viewpoints about Asperger's Syndrome, and this conflict on AS diagnosis strongly influence the way of dealing with AS patients. But it has been found that there are no adverse consequences which result from variations in viewpoints about AS.*

**Keywords:** Asperger's Syndrome, Autism, Misdiagnosis.

## 1. Background

A Classification and diagnosis of the various disorders that are possible in the human body are difficult since any mistake can create confusion and failure of the management. But the critical issue is that sometimes these mistakes in differentiation threaten the patient's life. Moreover, social and economic life can be destroyed because of misunderstanding by community and misdiagnosis by physicians.

Asperger Syndrome is a communication disorder in which the patient cannot have a normal social life. This syndrome is also characterized by abnormal movement, repetitive dialogue and some digestive problems. But AS patients reportedly have high intelligence quotient (IQ) scores and also have very creative minds. Autism is characterized by similar communication problem as AS. The commonalities between both the disorders make diagnosis fraught with error. The reasons behind occurrence of AS are many, but none of those causes have been confirmed to be the etiology of AS. The medications for AS serve to only minimize the symptoms. However, no medication can completely solve the problem. AS has been classified into two categories, non-diagnosed AS; and misdiagnosed AS. There are also

gifted AS patients who possess creative and intelligent minds.

AS patients cannot accept new people, his/her communication is exclusively with the people closest to him/her (such as parents, brothers and sisters). Hence, AS patients are socially impotent and their behavior is typically classified as misbehavior or rudeness because there is less awareness about the nature of this disorder.

The scientific community has had a very difficult time in accepting Asperger syndrome as being a distinct disorder. The risk of the community's rejection was potentiated by the fact that many neurologists and psychologists are treating AS using the same programs and medications that used in Autism.

According to the excited conflict about AS diagnosis and classification, this search was concerned with the AS and its classification, diagnosis and their influence on the management. Benghazi/ Libya was taken as a case study. This study may help increasing Asperger understanding and reducing confusion about identification of the nature of Asperger Syndrome, clarification of misdiagnosis between Autism and AS, reviewing of classification schemes for AS

and its various types and presenting the risks that can result from misunderstanding of this syndrome.

In 1944, Hans Asperger described a group of children who had social skills and behavioral problems as "Autistic Psychopathy". But the published paper was in an Austrian medical journal in Vienna. A year earlier (1943), Leo Kanner had defined the delays in early cognitive and language development in a group of children as a disorder called Autism. Kanner's original paper was cited at some US universities when he moved there from Vienna. However, because of the 2nd World War, the paper on Asperger syndrome didn't receive wide attention. The paper was published in German and mistranslated. Later the English researcher Dr. Lorna Wing changed the name Autistic Psychopathy to Asperger syndrome in the early 1970s. Finally in 1991, Frith translated the paper and published it again (Klin, 2003).

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American Psychiatric Association (APA) classified AS twice after discovery of Hans Asperger's paper in (1944) about the diagnosis of the social disability symptoms for a group of children that showed different and independent symptoms from Autism, but Asperger's paper was not available for translation because it had been written in Australian. So the paper of Leo Kanner had been approved at that time which collects both Asperger's Syndrome and Autism under one disorder. So the first classification confirmed that AS falls under Autism classification. Thereafter second classification was approved in the fourth Diagnostic and Statistical Manual of Mental Disorders (DSM-4) and AS was called Autism Spectrum Disorder (ASD). Recently High Function Autism (HFA) has become the dominant diagnosis for AS according to the fifth Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (Kaufmann, 2012).

Autism is a clinical symptom that results from neurological disorders due to genetic factors, and it includes difficulties in the concentration, skills and the social communication with many physical problems like blurred vision or hearing disability, those may be turn to an impairment because of wrong diagnosis or dealing misrecognition.

Asperger's Syndrome (AS) is a lifelong condition characterized by social communication disability. The main difference, between classic Autism and Asperger syndrome

is that people with AS will usually have had normal language development as a child and will generally be of average or above average intelligence. (Kaufmann, 2012).

High Functioning Autism (HFA) is a type of Autism with higher cognitive functioning than most Autistic patients. It is characterized by high intelligence quotients (IQs). Patients with this disorder have varied interests.

Diagnostic and Statistical Manual of Mental Disorders (DSM) A publication by American Psychiatric Association (APA) offers a standard classification of mental disorders. It is the official system to diagnose mental disorders in US. The Fourth edition of The Diagnostic and Statistical Manual of Mental Disorders (DSM-4) published by the American Psychiatric Association (18th May 2013), included AS under Autism Spectrum Disorders classification (ASD) or pervasive developmental disorders (PDD).

In the Fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), AS has been lumped with High Functioning Autism (HFA).

This last classification of AS has been questioned by some psychiatrists who are convinced that DSM-4 might be the right classification and they have rejected DSM-5 (Kaufmann, 2012).

**Table 1:** Distinction between ASD and HFA (Kaufmann, 2012).

	Autism Spectrum Disorders (ASD)	High Functioning Autism (HFA)
DSM edition no	Fourth	Fifth
IQ	Less than 70	More than 70
Verbal abilities	Weak	High
Repetitive behaviors	Present	Present
Interests	Only toward few things	Interest different and variable things
Anxiety	Uncommon	Highly possible
Medications	Present	Only for the symptoms

Regarding AS Etiology, the mechanism of transmission for AS is usually considered via genetics, but there is no particular evidence for this. The most common theories about the etiology of AS are:

- 1) There is probably a common group of genes where particular alleles render an individual vulnerable to developing AS (Baron-Cohen & Wheelwright, 2004).
- 2) A recent study has approved that low levels of serotonin is the main cause of AS and that genetics is also responsible for this story (Bauer, 1995).
- 3) The mirror neuron system theory (MNS) argues that the imitation impairment in AS patients resulted from the alteration in development of MNS (Kaufmann, 2012, Attwood, 2007).

Some epidemiological studies conducted in 2003 catalogued statistics about AS 5 /1000 person. Later in 2007 a review published from Finland showed that out of 1000 people, AS affected around 13 patients. The statistics published in 2013 showed that the syndrome affected 31 million people globally. The percentage of AS male patients is higher than the percentage of AS female patients by a ratio of Its clear from the figure that prevalence of Autism is in continues

increase year after year, due to expanding the consciousness in the communities about these disorders, or because of misdiagnosis of many disorders as an Autism according to some psychiatrist's opinions.

AS patients suffers from Loss of the ability to understand how to socially interact with people, Repetitive dialogues and actions, advanced language, exceptional memories, Feeling comfortable with routine, in addition to high sensitivity to loud voices or music and sharp colors

Loss of the ability to understand how to socially interact with people: AS patients cannot figure out what the nonverbal communication is, that's why they cannot perform a good body language as a response to the others and most of time the impression about them that they are rude or odd. But they can communicate and have good relations with usually the close people like the family (Bauer, 1995; Segar, 1997 and Freitag, 2015).

Repetitive dialogues and actions: For AS patients they try to prove their views by repeating what they say or what they do as a confirmation. All studies have explained repetitive actions as a result of the difficulties in performing proper body language, but there is no physical evidence that proves that AS patients have any problem in the motion center present in the brain or any other movement organ. This problem can be minimized by certain medications (Goldstein, Schwebach, 2004 and Freitag, 2015).

Advanced language: AS patients have a vocabularies momentum, and their speech seems unusual and odd, because of their abnormal reactions during conversation such as loud voice or weird facial expression (Altman, 1983, Atwood, 1998 and Freitag, 2015).

Exceptional memories AS patients have encyclopedia like memories. They have high capacity to remember things that are usually forgotten by normal people (example are dates, historical events, numbers, etc.). This can lead them to be successful in different specialties and certain jobs (Attwood, 2003 and Freitag, 2015).

As a result of AS patient's advanced language and exceptional memories they are characterized by creativity and magnificent work ethics.

Feeling comfortable with routine: AS patient prefer to have the same routine every day. They cannot tolerate any change in their routine easily. Since, this change for them is like meeting a new person to that they cannot deal with (Bauer, 1995).

High sensitivity to loud voices or music and sharp colors, particularly yellow color (Bauer, 2004 and Freitag, 2015).

Asperger's Syndrome has been classified into Non-diagnosed AS, Misdiagnosed AS and Gifted AS patients (AG). Non-diagnosed AS results from presence of another disorder or disease, whose symptoms match the symptoms of AS, for example Attention Deficit Hyperactivity Disorder ADHD, Alzheimer disease, Bipolar disorder, concentration disorders, Epilepsy, Migraine, schizophrenia, stroke (Kaufmann, W. E, 2012).

Whereas Misdiagnosed AS results from overlapping between symptoms of AS and another disease or disorder, and the horrible thing is the patient gets a treatment on basis of wrong diagnosis, and that usually worsens the patient health and life. Examples are: Attention Deficit Hyperactivity Disorder ADHD, Autism, Schizoid personality disorder, Schizotypal personality disorder, Obsessive Compulsive Disorder OCD (Kaufmann, W. E, 2012).

Finally, Gifted AS patients (AG) AS patients those with impressive abilities called gifted AS patients, they can be easily trained to achieve a good psychological performance with remarkable vocabularies, and they are aware that they are different but with training they can be socially active (Frith, U.2004).

Gifted AS patients have a high possibility to get depressed more than the regular AS patients because of their knowledge of what is happening to them (Frith, U.2004).

Non-diagnosed and misdiagnosed AS have consequences of misunderstanding and overload issues can cause an anger and aggressiveness revolution, AS patients are very sensitive people who cannot endure much orders and ignorance to what they are trying to explain, serious psychological consequences might result from misrecognition and careless against this phenomenon (Stewart, 2006).

Diagnosis is the most important part which can improve the patient's status or make it worse. The clinician or the specialist who is responsible on the diagnosis should be completely aware of all signs of the syndrome. Misdiagnosis or ignoring the symptoms can lead the patient to other serious issues (Klin & Volkmar, 2003). AS diagnosis is according to the clinical manifestation, Functional magnetic resonance imaging and or Adult Asperger Assessment (AAA) diagnostic test (Frith, U.2004).

According to the available symptoms the therapist can diagnose the patient as an AS patient if he/she has deep knowledge about signs of AS and how the patient will react with him/her. The low social interaction and the cognitive disability are the most distinguished signs of AS. Clinical manifestation is the key to know how to help the AS patient and mistakes turn to disasters in this step of diagnosis (Meyer & Newland, 2003).

Functional magnetic resonance image shows an alteration in the brain development and because of that AS patient has some disabilities in thought and behavior. Teratogenicity studies have linked the mis-development in the brain structure to exposure to teratogens which cause embryonic cells to migrate during fetal development (Kaufmann, W. E.2012, Attwood, S.2007).

Management of AS could be by prescribing drugs, Serotonin analogues therapy, social and psychological treatment and Diet regulation. However, until now there no particular medication for AS patients that would treat the syndrome, and all drugs they need to take to only decrease the symptoms (like repetitive behaviour) or to treat some disorders which resulted from misrecognition, such as drugs

for irritability, aggression, repetitive behaviour, hyperactivity, attention problems, anxiety and depression (Kaufmann, W. E.2012). Some studies assume that main biological reason for AS is low serotonin levels. Therefore, serotonin analogues (tryptophan) can improve AS patient's ability (Bauer, 1995).

The most important step in the treatment, the therapist should have enough knowledge and experience to deal with AS, and the training programs must include improvement of social skills, linking between body language and vocabularies, and decreasing the repetitive behavior (Aston, 2003). AS patients always have problems in digestion, and because of their high neurological sensitivity they should have a special diet and dietary supplements (Attwood, T.2007). The first step in the food regulation for AS patient is avoidance gluten and casein containing food (dairy products, wheat and barley) because AS patient have digestion difficulties against this type of food, and it can be very toxic to their nervous system in high amounts (Attwood, T.2007).

Just like normal healthy people AS patients should avoid food with artificial contents and preservatives, and high salt, fat, sugar content meals and fresh food can be perfect for them (vegetables and fruits). Some nutrition specialists recommend the herbal therapy for AS patient.

Some reviews have mentioned that the environmental changes (natural or otherwise) can cause AS. But this is completely wrong as the populations of AS patients that have been used for these studies had been classified under the non-diagnosed criterion (Myles et al, 2005 and Frith, 2004).

According to the excited conflict about AS diagnosis and classification, this search was concerned with the AS, its classification and diagnosis, which may help in increasing Asperger understanding and reduce confusion about AS classification in Benghazi/ Libya as a case study. This study tends to identify the nature of Asperger Syndrome, clarify the confusion in diagnosis between Autism and AS and presenting the risks that can result from misunderstanding and inappropriate management the syndrome.

## 2. Materials and Methods

Methodology is how approach issues and gathering answers to verify an assumption (Taylor et al, 2007). As been stated by Bryman et al, (2007) research methodology is describing the technique which used to collect the research data. For instance, interview, questionnaire or observation. This section is going to explain the research methodological stance, research data and how it was collected. In this study cross matching method was conducted by collecting primary data using questionnaires.

In this research questionnaire was used to collect the research data. A questionnaire is a tool of primary data collection, via group of questions, which are designed and given to the sample. It is an effective method to have information about perception, attitudes or opinion of people. (Ticehurst et al, 1999). Moreover, Case study is one of many

methods that can be used to increase the knowledge about certain phenomena (Yin, 2003), Benghazi/ Libya has been chosen as a case study in this work. Because there is a various health organization can be included in research sample as well as they were easier access for the researcher.

Questionnaire have advantages of not require a direct approach to the sample, leading to reduce the cost, rapid reply and reduce the effect of interaction between the researcher and the respondents (Bryman et al, 2007). Moreover, it is easy to be analyzed as all is written. (Denscombe, 2003).

On other hand, questionnaire also has drawbacks of low response rate and poorly or uncompleted responses. Moreover, it reduces the chance for the researcher to clarify some misunderstood points. (Bryman et al, 2007).

This search is conducted using questionnaire to collect primary data from the sample, which including group of neurologist, psychiatrist and Psychologist in Benghazi, the second biggest city in Libya.

In order to meet the research goals, questions were designed to answer whether Asperger's Syndrome is a sub type of Autism or not, if AS can be classified as an independent disorder or not, is it right to include it under Autism Spectrum Disorders (ASD) or classify it as High Functioning Autism (HFA), because both classifications do not consider being risky in the diagnosis criteria or treatment program.

Only closed questions were involved. The questions were designed to get data including specialty of the responders, the experience of the questionnaires' respondents, rough estimation of Autism patient who diagnosed by him/ her, Autism prevalence, AS incidences and classification of AS.

One form of questionnaire was prepared with two languages Arabic and English. Then questionnaires were revised before being circulated to avoid mistakes. Thereafter, they were distributed in Benghazi, at Benghazi Medical Centre (BMC), Pediatrics Hospital in Benghazi, Al Hawari Hospital for Psychological Disorders, Al Rowaisat polyclinic and Benghazi Centre for Autistic Children Care Methodology.

**Statistical Techniques and data analysis:** Valid ideas can be obtained by analysis of the collected data (Silverman, 1998). Statistical techniques are used to achieve data analysis. This study adopted descriptive statistics that determine the frequencies of responses using percentage, and the percentage was used to construct the charts.

**Data presentation and analysis:** According to Madu (1998) the data interpretation should be conducted with caution and the generalization should be avoided.

This section will present and analyze the primary data, which was collected from questionnaires that reflects respondents' opinions about the search objectives.

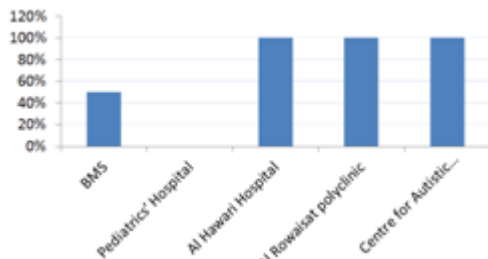
3. Results

*The response rate of the questionnaires:*

One form of questionnaire was circulated with two languages Arabic and English in Benghazi, at Benghazi Medical Centre (BMC), Pediatrics Hospital in Benghazi, Al Hawari Hospital for Psychological Disorders, Al Rowaisat polyclinic and Benghazi Centre for Autistic Children Care Methodology. The target was neurologist, psychiatrist, Psychologist and their response rate is explained in Table (II) & figure (1).

**Table II:** Response Rate of the questionnaires

Group	Distributed	Received	Excluded	Usable	Response Rate Percentage
BMC	10	5	0	5	50%
Pediatrics' Hospital	2	0	0	0	0%
Al Hawari Hospital	10	10	0	10	100%
Al Rowaisat polyclinic	7	7	0	7	100%
Benghazi Centre for Autistic Children Care Methodology	3	3	0	3	100%
Total	32	25	0	25	78.13%



**Figure 1:** Response Rate of the questionnaires

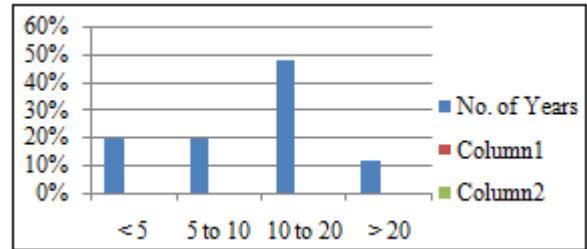
From both Table (II) and figure (1), it's clear that although the response rate for pediatrics Hospital is zero the overall response for the search sample was very good.

*The experience of the questionnaires' respondents:*

The participants were neurologist, psychiatrist, Psychologist and their experience is illustrated in Table (III) & figure (2).

**Table III:** The experience of the questionnaires' respondents

Number of years	Frequency	Percentage
< 5	5	20%
5-10	5	20%
10-20	12	48%
> 20	3	12%
Total	25	100%



**Figure 2:** The experience of the participants

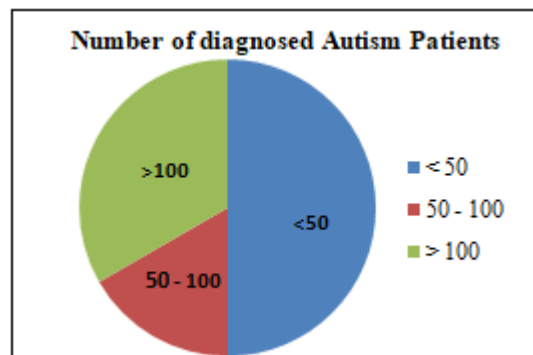
From table (III) & figure (2), it has been illustrated that the respondents have acceptable experience to be taken as a sample in this search.

*The number of Autism patients that been diagnosed by the participants:*

The number of respondents' patients of Autism is tabulated in Table (IV) & figure (3).

**Table IV:** Autism patients that been diagnosed by the participants

Number of diagnosed Autism Patients	Frequency	Percentage
< 50	12	50%
50-100	4	16.67%
> 100	8	33.33%
Total	24	100%



**Figure 3:** Autism patients that been diagnosed by the participants

It can be noted from table (IV) & figure (3) that one out of 25 participants denied to answer this part. It is also clear that 50% of participants has an experience in diagnosis of Autism with a range that under than 50 patients. Moreover, more than third the sample their experience in this aspect with more than one hundred Autism patient which is too high.

*The respondent's comment about the annually prevalence of Autism patients:*

The respondents' opinions about the prevalence of Autism is explained in Table (V) & figure (4). Since they were asked if there is an increase in Autism prevalence every year or not.

**Table V:** Autism Prevalence per year

Increasing in Autism every year?	Frequency	Percentage
Yes	22	88%
No	3	12%
Total	25	100%

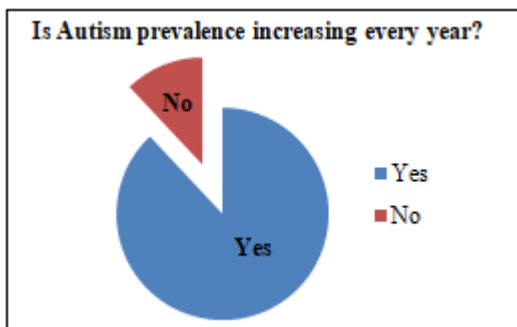


Figure 4: Autism Prevalence per year

It is clear from both table (V) & figure (4) that the vast majority of research sample believe that the Autism prevalence is increasing yearly.

**AS Diagnosis:**

The respondents' experience in AS diagnosis is explained in Table (VI) figures (5 & 6). Since they were asked if they ever diagnosed any patients as AS. Moreover, they were asked whether they consider AS as Autism subtype or separate condition.

Table VI: AS Diagnosis

	Yes		No		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Have participant ever diagnosed patient as an AS?	12	48%	13	52%	25	100%
Is AS considered as Autism subtype?	10	40%	15	60%	25	100%
Is AS an independent syndrome?	15	60%	10	40%	25	100%



Figure 5: Have participant ever diagnosed patient as an AS?

- Autism and Asperger's syndrome are different disorders.

Table VII: The reason of considering the Asperger's patients as separate conditions

A*		B**		C***		Total	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
8	42.11%	9	47.37%	2	10.53%	19	100%

Where: \* A= Asperger's patients have different symptoms.  
 \*\*B= Asperger's patients need a special treatment.  
 \*\*\*C = Autism and Asperger's syndrome are different disorders.

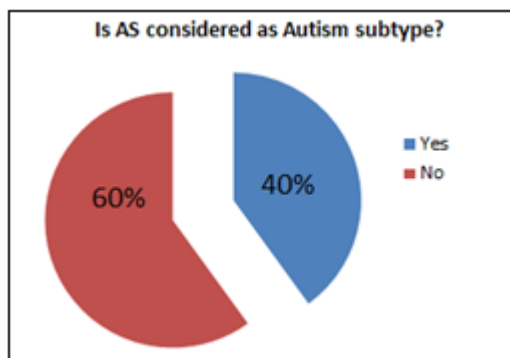


Figure 6: Is AS considered as Autism subtype?

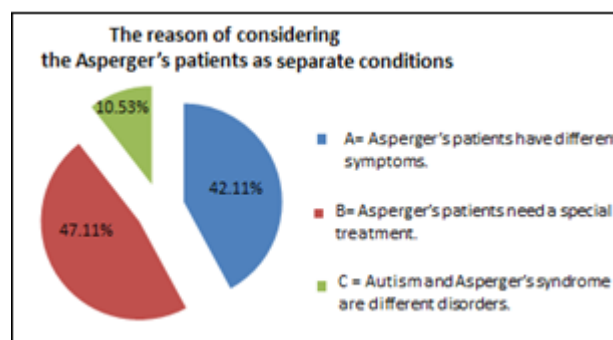


Figure 7: The reason of considering the Asperger's patients as separate conditions?

Table (VI) figures (5 & 6) are showing that although almost half of the research participant's never diagnosed patient as AS, about 60% of them considers AS as separate condition.

This study also concerned with differentiation between AS and Autism in diagnosis. In this light research participants was asked questions which is demonstrated in table (VII, VIII and IX respectively).

Table (VII) and figure (7) have shown participants' choices for the reason of considering the Asperger's patients as separate conditions, if they do so in previous section (Table VI).

They were giving the following options to select from:

- Asperger's patients have different symptoms.
- Asperger's patients need a special treatment.

It can be seen from table (VII) and figure (7) that only 19 out of 25 of research sample answered this question and their choices were almost the same for A & B whereas few of them believe in C.

Table (VIII) and figure (8) have presented respondents' answers about the hypothesis that they are supporting.

They were giving the following hypothesis to select from:

- Asperger's syndrome is an independent disease.
- Asperger's syndrome falls under Autism classification.
- Asperger's syndrome is a part of a broader category called autism spectrum disorder (ASD).
- Asperger Syndrome and high functioning autism (HFA) are often referred to as the same diagnosis.

**Table VIII:** The participants’ Knowledge about AS.

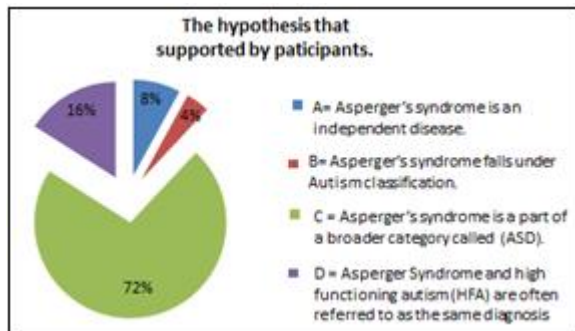
A*		B**		C***		D****		Total	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
2	8%	1	4%	18	72%	4	16%	25	100%

Where: \* A= Asperger’s syndrome is an independent disease.

\*\*B= Asperger’s syndrome falls under Autism classification.

\*\*\*C = Asperger’s syndrome is a part of a broader category called autism spectrum disorder (ASD).

\*\*\*\*D=Asperger Syndrome and high functioning autism (HFA) are often referred to as the same diagnosis



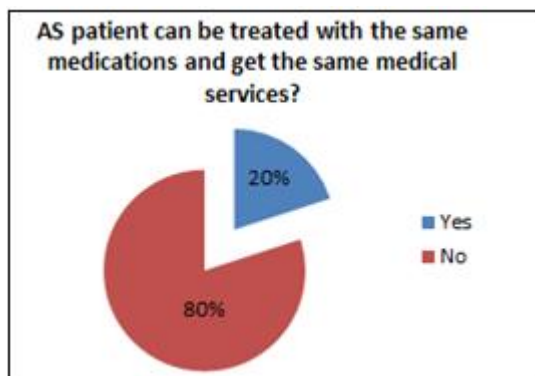
**Figure 8:** The participants’ Knowledge about AS

It is been shown in table (VIII) and figure (8) that most of the respondents (72%) were agreed that Asperger’s syndrome is a part of a broader category called autism spectrum disorder (ASD).

Research respondents were finally asked if AS patient can be treated with the same medications and get the same medical services and their responses are explained in table (IX) and figure (9).

**Table IX:** AS Diagnosis

	Yes		No		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
AS patient can be treated with the same medications and get the same medical services?	5	20%	20	80%	25	100%



**Figure 9:** If AS patient can be treated with the same medications and get the same medical services

In the light of AS diagnosis, almost the half of the sample have experienced it with only 40% of the respondents consider AS as Autism subtype, however 60% believe in that AS is an independent disorder (Table VI & figure 6). This observation indicates that the conflict about the classification of AS and its differentiation from Autism exist between research participants and that supported by Atwood (2006) who has stated that AS is one of those disorders that fall under the spectrum of overlapping disorders.

Proceeding with the previous argument and 60% of research participant agreed that AS is a separated disorder, the majority of them believe that AS patients either have different symptoms or need a special treatment (Table VII & figure 7). This data is supported with what Aston has mentioned in 2003 about the specialty of AS treatment program. Moreover, the differentiation between Autism and Asperger’s Syndrome in symptoms and treatment was stated by both Atwood (2003) and Eisenmajer et al. (1996).

By comparing tables VI & VII, it can be seen that although 60% of the research sample were agreed with that AS is a separated disorder, 76 % of the research sample answered the question about the reason of considering the Asperger’s patients as separate conditions. From this observation it can be concluded that despite considering that AS is Autism subtype, some respondents still have the opinion of that AS require a separate treatment program.

Continuing with participant knowledge, table VIII and figure 8 have revealed that the largest portion of study sample were agreed that Asperger’s syndrome is a part of a broader category called autism spectrum disorder (ASD) complying with the second classification in the fourth Diagnostic and

**4. Discussion**

Despite the fact that the response rate for pediatrics Hospital was zero, the overall response for whole research sample was very good, which a good indicator about the sample quality.

Although that the sample was randomly selected from neurologist, psychiatrists and psychologists, 80% have experience not less than 5 years (Table IV & Figure 2). In addition to the preceding discussion the participants also have an experience in diagnosis of autism disorder with more than one third of the sample have diagnosed more than one hundred Autism patient which is too high (Table IV & figure 3). Moreover, the vast majority of research sample believe that the Autism prevalence is increasing yearly (Table V & figure 4).

Statistical Manual of Mental Disorders (DSM-4) (Kaufmann, 2012).

Finally, from table (IX) and figure 9 it can be concluded that having risk from misdiagnosed or misclassification of AS is low in this case study as long as 80% of the sample were agreed with that AS patients require special and different medications and medical services that been different from that of Autism.

AS Misconceptions may lead to have aggressive patients, who might threaten the safety of community. Psychological studies have reported scientific evidence and stated that misconception of AS patients may lead to display an aggressive attitude towards people. Rather, the specialists have proved that AS patients themselves can become victims (Bauer, 1995 and Frith, 2004). Despite that the AS patients are known to have remarkable memories and vocabularies, which can help them in holding a decent job and even becoming successful. It has been mentioned that certain job positions like marketing or public relations are tough if not impossible for them (Gallagher & Gallagher, 2002 and Frith, 2004).

## 5. Conclusion

From the data had been collected it's obvious that the media (neurologists and psychiatrists) have different viewpoints about Asperger's Syndrome. But the results can be divided to 2 parts, the first part that although AS is an independent disorder and it cannot be diagnosed as an Autism, since AS is an Autism Spectrum Disorder as what have been published in DSM-4. The second part concludes that despite whether AS is an Autism subtype or independent disorder, it shouldn't be treated with same criteria that Autistic patients have been treat with it.

Those results considered to be a good result as there is no risk on the patient's life and both opinions lead to treat and handle with AS patient with a successful way that would makes his/her state improves.

In conclusion the research data analysis leading to reject that the Asperger's Syndrome is a sub type of Autism and it cannot classified as an independent disorder) and accept that Asperger's Syndrome is an independent disorder and it's also right to include it under Autism Spectrum Disorders (ASD) or classify it as High Functioning Autism (HFA), because both classifications do not consider being risky in the diagnosis criteria or treatment program.

## 6. Future Scope

The finding of this research could be of interest to various user categories in health field. It could improve the understanding of Asperger syndrome and explore the critical impact of misdiagnosis.

Although this study has concluded that the AS patients are not at risk of misdiagnosis as long as they are treated with appropriate way. Several questions arising from this research should be pursued. Firstly, the approved hypothesis should be approved for different samples in different cities in Libya

in order to be generalized. Furthermore, this study could be a good start to reveal the misdiagnosis of AS in Libya.

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| <p>[19] Myles, B. S., Hagen, K., Holverstott, J., Hubbard, A., Adreon, D. and Trautman, M., 2005. Life Journey through Autism: An Educator's Guide to Asperger Syndrome. Organization for Autism Research (NJ1).</p> <p>[20] Segar, M., 1997. A survival guide for people with Asperger syndrome. Nottingham, UK: The Early Years Diagnostic Centre.</p> <p>[21] Silverman, D., 1998. Qualitative Research Theory, Method and Practice, L-Tichehurst, G. W.; and Veal, A. J., 1999. Business Research Methods: A Managerial Approach, Longman, Australia.</p> <p>[22] Stewart, M. E., Barnard, L., Pearson, J., Hasan, R. and O'Brien, G., 2006. Presentation of depression in autism and Asperger syndrome: A review. <i>Autism</i>, 10 (1), pp.103-116.</p> <p>[23] Tylor, S. and Bogdam, R., 1984. <i>Introduction to qualitative research methods. The search for meanings</i> (2<sup>nd</sup> ed.), New York: John Wiley &amp; Sons.</p> <p>[24] Yin, R. K., 2003. Case study research: Design and methods. Newbury Park, CA: Sage.</p> | <p>2) Have you noticed that autism prevalence is increasing every year?<br/>A) Yes B) No</p> <p>3) Have you ever diagnosed any patient as an Asperger's syndrome patient?<br/>A) Yes B) No</p> <p>4) Did you consider them as autism subtype?<br/>A) Yes B) No</p> <p>5) Did you consider Asperger's patients as separate conditions?<br/>A) Yes B) No</p> <p>6) If you consider Asperger's patients as separate conditions, please explain why?<br/>A) Asperger's patients have different symptoms.<br/>B) Asperger's patients need a special treatment.<br/>C) Autism and Asperger's syndrome are different disorders.</p> <p>7) According to your knowledge which hypothesis do you support?<br/>A) Asperger's syndrome is an independent disease.<br/>B) Asperger's syndrome falls under Autism classification.<br/>C) Asperger's syndrome is a part of a broader category called autism spectrum disorder (ASD).<br/>D) Asperger Syndrome and high functioning autism (HFA) are often referred to as the same diagnosis</p> <p>8) Do you think that Autism and AS patient can be treated with the same medications and get the same medical services:<br/>A) Yes B) No</p> |
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**Questionnaire sample:**

*Dear Sir/ Madam*

It would be grateful if you could find the time to participate in this research by completing and returning the attached questionnaire to me as soon as possible. It will not take more than 5 minutes.

All your responses will be kept strictly confidential, and the questionnaires will be shredded once their analysis is completed.

The topic working on is Failure of Asperger's Syndrome Management as a result of Misdiagnosis. The issue of interest is related to the following:

- 1) Identification of the nature of Asperger Syndrome
- 2) Clarification of confusion in diagnosis between Autism and AS.
- 3) Review of classification schemes for AS and its various types.
- 4) Presenting the risks that can result from misunderstanding the syndrome.

If you have any further information or inquiries, please contact me on 00218 9205374322

You're sincerely,

**Dr. HwuidaMaghoud**

**Thank you for taking the time to fill in this questionnaire, you will remain anonymous.**

**I just need a sample of an audience (in this case media doctors) to use as a clarification for graduation project.**

**Specialty: Department:**

**Employment duration:**

- 1) How many Autism patients have you diagnosed?  
A) Less than 50 B) 50-100 C) More than 100