Investigating the association between gender and patient experiences in those with suspected ADHD

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Abstract

Aim: The study aimed to expand on the limited literature available to determine whether there are differences in experience with healthcare workers (general experience and communication) upon discussion of possible ADHD symptoms depending on an individual's gender. The hypothesis presented were that differences would be present within general experiences as well as communication style of healthcare practitioners towards individuals within particular gender groups, as well as differences in perceived treatment. **Method:** Participants were recruited through social media using a non-randomized purposive sampling technique (N= 119) and completed an online survey containing a demographic questions, the Adult ADHD Self-Report Scale, the General Short Patient Experiences Questionnaire as well as the Heath Care Communication Questionnaire. **Results:** Results of both the independent samples t-test and Mann Whitney-U test indicated that there was no significant difference for scores in both general experiences and healthcare communication between male and female participants. Results from the incorrect treatment variable found a small positive correlation. **Conclusion:** While results found that differences between male and female participants was non-significant for both general experience and communication, differences were found within male and female participants and whether they perceived their treatment to be incorrect. Further research within this area may lead to more beneficial results upon studying healthcare practitioners biases directly.

Keywords; gender, ADHD, healthcare, patient experiences,

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Introduction

Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder that pertains to individuals with symptoms such as poor concentration, impulsivity and distraction by external stimuli, poor executive function skills, forgetfulness, and restlessness, among many others (Lange et al, 2010; Wilens & Spencer, 2010). The DSM-5 categorises ADHD into three different presentations: Inattentive, Hyperactivity/ Impulsivity with the third presentation being combined inattentive and hyperactivity (McBurnett et al., 1999). It had previously been thought that symptoms of ADHD diminished within adulthood and were only present within children, young males, however we are now aware that this is not the case and that symptoms of ADHD are present within adults but may be far less disruptive or obvious (Barkley, 2006; Rucklidge, 2008). Due to the multitude of forms in which the disorder may present itself, particularly within various demographics of age and gender, there is a higher presence of stigmatisation of the disorder, as well as bias towards particular gender groups in regards to the rates in which they are referred (Burch, 2004; Mueller et al., 2012). This bias may be attributed to multiple factors, including diagnostic criteria, gender-based stereotypes present within clinical professional environments, as well as the stigma surrounding the condition in it's entirety (Young et al., 2020). This review will explore the potential gender based stigma within healthcare practices by investigating male and female experience with healthcare professionals in relation to identifying and potentially diagnosing ADHD. As well as this, this review will outline the negative outcomes that can potentially occur due to this gender bias for individuals such as late age diagnosis and further decline in mental health, with research to support this occurrence.

Stigma in Attention Deficit Hyperactivity Disorder

Recognition of ADHD as a valid disorder diagnosed within adults and not just children specifically have largely increased, in turn broadening the accessibility of available services and increasing the number of adults who are provided treatment (Harpin, 2005). However, prejudice and stigma are still present in the case of adult ADHD within clinical and public spaces, creating harmful stereotypes with many still believing it is an invalid diagnosis in place for those who are "lazy" and refuse to put in an effort within the workplace, educational and social environments (Justmann, 2015). This misconception can lead to the stigmatization of women who continue to struggle with ADHD in adulthood. Due to the ever-present stereotype that ADHD is purely hyperactive and impulsive symptoms, inattentive subtype ADHD still goes vastly unnoticed (Quinn, P.O, 2008; Young et al., 2020). Women tend to meet the criteria of the inattentive subtype at higher rates than men which, unfortunately, indicates that they tend to go unrecognised in many cases (Slobodin & Davidovitch, 2019). Gender bias can manifest in the methods in which healthcare providers communicate with women with ADHD. Women may be more likely to experience dismissive or patronizing behaviour from their healthcare providers, which can result in a lack of trust and may contribute to a reluctance to seek treatment (Becker, 2020). An assessment of the healthcare provisions for ADHD within the UK during a consensus group meeting by Young and colleagues (2021) sought to discuss the dereliction of the healthcare system in terms of diagnosing and providing accessible interventions for those with symptoms of ADHD. The meeting was held to evaluate the rate at which adults and children are being diagnosed, the efficiency and adequacy as well as accessibility of the NHS services for those with ADHD. Many conclusions formed within the meeting, particularly centring around the change needed to increase accessibility of private and effective treatment, would aid to create a positive and more productive environment for individuals to receive appropriate help for their symptoms.

It was also concluded that the largest barrier to receiving treatment is the stigma and lack of awareness surrounding ADHD, which appears to be present within the healthcare and education systems, particularly within females with ADHD (Young et al., 2021).

Gender and ADHD expression

Unfortunately, majority of research to date on the symptomology of ADHD has been studied using young males, who are also more likely to receive a formal diagnosis, thus creating a research gap due to its non-inclusivity of those of the opposite sex with the disorder (Barkley, 2002; Derks et al, 2007; Mahone & Wodka, 2008). Women with ADHD are often underrepresented in research studies, which can lead to a lack of understanding about the unique challenges and needs of women with ADHD (Hinshaw et al., 2021). This can result in a lack of targeted interventions or treatments that are specifically designed for women with ADHD. Earlier studies have focused more so on the comparison of male and female symptoms of the disorder, in which males are likely to possess more outwardly expressed and noticeable symptoms such as those portrayed within hyperactive/ impulsive subtypes (Crawford, 2003: Nadeau, 2002). It has been found that woman have a tendency to internalize symptoms and disorders, with men tending to externalize symptoms (Levy et al., 2005). Those with inattentive subtype ADHD are considered increasingly suspectable to being overlooked as symptoms of this subtype are not seen as disruptive and may easily go unnoticed by teachers and parents early on in childhood, creating a referral bias (Biederman et al., 2002; Eryılmaz et al., 2019). Mowlem and colleagues (2019), when studying gender differences in predicting ADHD clinical diagnosis, found that a strong predictor of diagnosis of ADHD was the externalising of behaviours, with female participants who externalise symptoms being more likely to receive a diagnosis than those who did not. The researchers suggest that current diagnostic criteria as well as the current clinical practices may be biased towards the male presentation of ADHD, with hyperactive/impulsive subtypes being

recognized much quicker than inattentive subtypes (Mowlem et al., 2019). Healthcare providers may not consider ADHD as a potential diagnosis for women if said symptoms are not outwardly expressed, leading to a lack of screening or referral to mental health specialists (French et al., 2020). This can result in missed opportunities for early intervention and management of symptoms. Many studies findings have revealed a severe impact of stereotyping ADHD symptoms based on gender, which has made it increasingly difficult for clinicians and educational professionals to identify behaviours that would otherwise correspond with symptoms of ADHD (Lynch & Davison, 2022). Research by Bruchmüller and colleagues (2012) studied the methods of psychologist's diagnostic processes, in which the researchers sent 1,000 psychologists brief case studies of fictional individuals, one in which was considered to qualify for an ADHD diagnosis in accordance with the DSM-5 criteria and three in which were not considered to meet the criteria to various lengths but did present traits similar to that of ADHD. Interestingly, 16.7% of the psychologists that had taken part in the study diagnosed individuals that did not meet the criteria for diagnosis in accordance with the DSM-5, as well as diagnosing the male cases twice the amount than that of the female cases. The interpretation of the outcome of this study may be that ADHD is not only over diagnosed by professionals, but it is being over diagnosed in males, presenting a possible potential gender bias or lack of knowledge on the female ADHD symptomology within healthcare professionals.

Late Age Diagnosis

A late age diagnosis of ADHD is thought to inflict emotional distress for an individual and can significantly reduce quality of life (Ginsberg et al, 2014). Unfortunately, woman tend to receive an ADHD diagnosis much later in life compared to their male counterparts as a consequence of overlooking symptoms as well as the presence of referral bias (Grevet et al., 2006). Without access to treatment or diagnosis, individuals may develop issues with self-

esteem due to symptoms such as poor executive functioning and inability to concentrate, which can also greatly affect quality of life within an academic and work setting (Harpin et al., 2016). This may correlate to low self-esteem being considered a common symptom of woman with ADHD, particularly within inattentive types and those who have remained undiagnosed (Kita & Inoue, 2017). The effect of untreated ADHD may be detrimental to the individual due to lack of resources provided to manage levels of symptoms (Young et al., 2021). Furthermore, a lack of treatment may lead to the development of comorbid disorders such as anxiety and depression which can further decrease quality of life (Hamed et al, 2015). Thankfully, within modified versions of ADHD criteria for diagnosis within the DSM-5, examples of behaviour aligning with symptoms of the disorder has been updated to correspond more appropriately to adolescents and adults (Epstein & Loren, 2013).

Comorbid Disorders and Misdiagnosis

ADHD is also associated with comorbid disorders of similar presentation such as mood disorders, anxiety, depression and substance abuse or other learning disorders (Anthshel et al., 2008; Biederman et al., 1999). Clinicians tend to be hasty in misjudging the indicators of ADHD and diagnosing conditions with comparable symptomology rather than diagnosing ADHD itself, especially within women (Quinn, 2005). As a result, many women with ADHD do not receive the appropriate treatment, which can lead to a host of negative consequences. For example, due to symptomatic overlap between ADHD and Borderline personality disorder (BPD), many woman find themselves misdiagnosed with BPD for years before finally receiving an accurate diagnosis (Weiner et al., 2019). In what may be due to cases of misdiagnosis of similar presenting disorders in woman, many go untreated for instances which are actually symptoms of ADHD and are highly likely to be diagnosed with a mood or personality disorder instead (Asherson et al., 2014). An estimated 18-34% of adults with ADHD also qualify for a diagnosis of borderline personality disorder (Weiner et al.,

2019). Within a study by Ferrer and colleagues (2010) a sample of individuals diagnosed with borderline personality disorder were assessed for attention deficit hyperactivity disorder in order to study rates of comorbidity between the two disorders. Participants consisted of 181 females between the ages of 18 and 50 years old who had previously been diagnosed with borderline personality disorder. Results of the study found that sixty-nine participants, 38.1% of the total sample, met the criteria for an ADHD diagnosis. High comorbidity and similarity between symptoms within the disorders may indicate that it is common for the two to be in disarray during the assessment process, with individuals receiving a diagnosis of both disorders in some cases (Ferrer et al., 2010). The frequent misdiagnosis of BPD in woman with ADHD is theorised to be due to many practitioners feeling more inclined to diagnose woman with BPD, anxiety, or depressions, overshadowing their potential ADHD (Quennaville et al., 2020; Young et al., 2021). This may leave woman with an incomplete answer and the incorrect interventions for the symptoms they are struggling with. The disentanglement of female-particular symptoms from comorbid mental health issues such anxiety and depression is essential in order to ensure the needs of these individuals are being met (Quinn, 2008).

Conclusion

To conclude, many factors are needed to further diminish the gender bias within female ADHD. An improvement in consistency and accessibility within public and private healthcare systems for ADHD is necessary to ensure the quality of diagnosis and treatment is intact (Young et al., 2021). To combat the stigma of ADHD in women, it is important to raise awareness and understanding of the disorder. This includes challenging stereotypes and promoting positive representations of women with ADHD in the media and popular culture. Similarly, further educating teachers and academic professionals of the symptoms of ADHD in females may increase the volume of woman receiving assessment and providing sufficient

support in academic setting, thus improving quality of work and of general life outside of the academic setting and reducing referral bias (Meaux et al., 2009). While research within the area of ADHD in woman and individuals assigned female at birth (AFAB) are growing exponentially, there are still many areas that require a better understanding in order to extinguish potential stigma and stereotypes within the experiences of woman diagnosed with or suspected of having the neurodevelopmental disorder (Holthe & Langvik, 2017). The benefits of increasing such research may lead to a decrease in stigma in women with ADHD symptoms, further providing more favourable outcomes such as decrease in criminality and an increase in self-esteem and quality of life for the individual (Pawaskar et al., 2020). This increase may also lead to a reduction in cases of misdiagnosis with disorders involving similar symptoms, such as borderline personality disorder, as well as reduction in symptoms of anxiety and depression in cases of untreated ADHD (Ginsberg et al., 2014).

Current study

The current study will aim to examine the possible gender bias for woman with ADHD, specifically within a healthcare setting. The study will seek to investigate the general experiences as well as the quality of communication by healthcare workers in order to determine any differences in the way they are treated depending on the individuals gender. The study will also aim to determine whether participants perceived that they had received the incorrect treatment, depending on their gender. Within this study, the term ‘gender’ is used instead of ‘sex’, as ‘gender’ is shaped by an individual’s environment and experience in addition to sex determined biological characteristics (Wizemann & Pardue., 2001).

With acknowledgment to previous research, it is hypothesised that

(1). Differences will be found within the *general experiences* with healthcare practitioners of individuals within particular gender groups.

(2). It is hypothesised that differences will be found within the *perceived communication* with healthcare practitioners of individuals within particular gender groups.

(3). It is also hypothesised that perceptions in the correctness of treatment will differ between gender groups.

Methods

Participants

Participants were collected using a non-randomized purposive sampling technique. A short description of the studies aim and demographics criteria along with the link to gain access to the survey were posted on social media via the likes of Facebook and Instagram. The link was also posted to groups on the app Reddit, known as subreddits, such as r/adhdireland and r/ADHD to recruit likely participants. Individuals were also encouraged to share the link to the questionnaire with others who they deem eligible to take part. The population size of adults with ADHD in Ireland is 160,000, and thus with a 95% confidence interval and an 8% margin of error it was hoped to recruit roughly 150 participants, based off a Qualtrics sample size calculator.

The initial sample of participants consisted of 126 individuals over the age of 18 obtained through social media, 4 of which were excluded from the analysis as they had not met the minimum score of 4 marks within the ASRS questionnaire to be included. Unfortunately, those who identified as non-binary (N=3) were also excluded from the study due to the nature of the analysis. The final sample then consisted on 119 individuals (88 female and 31 male), with a mean age of 28.14 (SD= 7.77) ranging from 18 to 59.

Measures

Demographics. Demographics questionnaires for this survey asked participants to indicate their gender (male, female, prefer not to specify or other) as well as to provide their age. Participants were then asked whether they suspected they have ADHD or not as a form of inclusion criteria, only those who marked yes would be used within the data analysis.

Adult ADHD Self-Report Scale. The Adult ADHD Self-Report Scale (ASRS) is an 18-item questionnaire used to assess symptoms of attention deficit hyperactivity disorder in

those over the age of 18. Those taking part in this questionnaire will read 18 questions, or 6 if part A of the questionnaire is being used alone as is within this study, in which they must rate each using a 5-point Likert Scale from Never (0) to Very Often (5) in accordance with how often each scenario was experienced. An example of a question that would be contained within part A of the questionnaire is as follows: *How often do you have difficulty getting things in order when you have to do a task that requires organization?*. The three subscales assessed within this questionnaire are inattentiveness, hyperactivity/ impulsivity (Motor) and hyperactivity/impulsivity (Verbal). The self-report scale is split into two sections: Part A being the first six questions and part B being the remaining 12 questions (7-18). Within part A participants must score a total of 4 or more to be considered within range for an assessment of Adult ADHD by a professional (Adler et al, 2006). Section A of the (ASRS) used within the exclusion and inclusion criteria, however section B was not included within the study. The ASRS has a high internal consistency (Cronbach's alpha = 0.88) and validity of (r = 0.84) (Kessler et al., 2005) This questionnaire was purely used for inclusion criteria and therefore was no included within the results analysis and only those who obtained a score of 4 or higher were included within the studies analysis. Scores for each participant were totalled manually.

Generic Short Patient Experiences Questionnaire. The Generic Short Patient Experiences Questionnaire (GS-PEQ) is a 9-item questionnaire used to access the quality of encounters with healthcare professionals. It involves reading and rating items using a Likert Scale from Strongly disagree (1) to Strongly Agree (5). An example of one of the items from the GS-PEQ is as follows: *Did you receive sufficient information about your potential diagnosis/ affliction?* The factors accessed within the GS-PEQ are outcome, clinician services, user involvement, incorrect treatment, information, organisation, and accessibility

(Sjetne et al., 2011). Higher scores within this questionnaire indicated higher levels of positive experiences. The GS-PEQ has a high internal consistency (Cronbach's alpha = 0.70).

Health Care Communication Questionnaire. The Health Care Communication Questionnaire (HCCQ) is a 13-item questionnaire use to assess the quality of communication displayed during an individuals encounter with a healthcare professional. Participants are asked to read and rate each statement on a Likert scale from Not at all (0) to Very Often (5). An example of one of the HCCQ items is as follows: *The healthcare professional showed respect from privacy.* The factors assessed within the HCCQ are respect, problem solving, lack of hostility and non-verbal intimacy (Gremigni et al., 2008). Items 9,10 and 11 of this questionnaire are reversed and will be scored as such. High scores within this questionnaire indicated higher levels of positive communicative encounters. The HCCQ was found to have a high internal consistency (Cronbach's alpha = 0.72-0.86) with validity of (r = 0.51-0.75).

Design

This research design for this study involved a quantitative method within a cross-sectional study using a survey which investigates the relationship between the variable and two groups at a single point in time. A quantitative approach was chosen for this study as it is best suited towards the research groups investigated within the study. The predictor variables for this study were gender and the criterion variables were the observed experiences and communication of healthcare professionals, as well as incorrect treatment, which was specifically obtained from within the General Short Patient Experience questionnaire.

Procedure

Data for the study was collected via Google Forms survey. A pilot version of the study was not necessary for this research question as no new questionnaires were used, the validity and reliability of which have all been determined. The link to the survey was posted to multiple online social media groups on Facebook, Instagram, and Reddit. Upon viewing

the link to the survey through either Facebook, Reddit or Instagram and reading a short overview of the study's contents, participants were met with a reiteration of the preferred characteristics needed to take part in the survey, to decide it they are best suited to take part. Participants were met with the briefing form containing the background and general outline of the study, what it is they were expected to do, authors, supervisors and organisations involved in the study, as well as their right to withdraw from the study at any point without penalty (See Appendix A). Participants were made aware that due to the unidentifiable nature of their data that individual data could not be withdrawn after the point of submission.

Consent was obtained through means of a consent form at the beginning of the questionnaire which participants were asked to thoroughly read and agree to before gaining access to the rest of the questionnaire (See Appendix B). The consent form contained statements that the participant must agree with such as stating their awareness of their freedom to withdraw from the study at any point, their awareness of any potential risks that may come from partaking in the study and their awareness that their anonymity cannot be held within certain circumstances such as to subpoena, mandatory reporting or freedom of information claim. All participants consent forms are kept in a password protected google document separate to their data for convenience in the case that they will need to be retrieved at a later date. Participants must tick yes or no to indicate they understand the contents within the consent form before they are able to proceed to the survey itself.

Once participants have read the briefing form and have given informed consent, they will be asked to inform their age and gender identity within the demographic's questionnaire (See Appendix C). Secondly participants will engage in the Adult ADHD Self-Report Symptom Questionnaire-Part A (ASRS) (within appendix D), The General Short Patient Experiences Questionnaire (See Appendix E) as well as the Health Care Communication Questionnaire (See Appendix F). No use of medical or clinical participants have been sought

after for the partaking in this study. While a diagnosis of ADHD was not necessary or sought after to take part in this study, participants were asked to answer a questionnaire regarding symptoms of ADHD that are self-determined. As previously stated this questionnaire was used within the inclusion criteria and a score four out of six remained the cut off point for inclusion. For the next portion of the study participants engaged in questionnaires in which they must rate the general experience and quality of communication they received during their time with any particular healthcare practitioner in regards to their possible ADHD, whether this be diagnosis or a referral procedure. Participation was estimated to take 10-15 minutes to complete however no time limit was provided. Upon conclusion participants must read the debriefing form (See Appendix G) to further reiterate the reasoning of the study and to ensure they understand any privacy notices and confidentiality of their data before submitting. Various helplines were also allocated within the debriefing form in the event that any individual experiences psychological stress due to their participation in the study. Upon submission of their data, participants will have concluded their active participation of the study and may exit the link within their browser.

This research study was approved by the National College of Ireland's Ethics Committee. Ethical guidelines were followed in accordance with the Psychological Society of Ireland's Code of Professional Ethics (2010) and National College of Ireland's Ethical Guidelines for Research with Human Participants. While participants were not expected to be subject to topics typically considered to be distressing, in the case that recollection of some participants experiences prove to be afflicting, allocated helplines will be provided within the debriefing form.

Results

Descriptive Statistics

The current data was taken from a sample of 119 participants (N = 119). The mean age of participants was 28.14, ages ranged from 18-59. 73.9% of participants were female (N = 88), 26.1% were male (N = 31). Means (M), Standard Deviations (SD), Medians (MD), and Range were obtained, as well as tests of normality. There are 3 continuous variables within this study including general patient experience, healthcare communication and incorrect treatment. The results of all continuous variables are presented below in table 1.

Table 1

Descriptive statistics for all continuous variables (N = 119)

Variable	*M* [95% CI]	*SD*	Range
Age	28.14	7.77	41
General Patient Experience	29.96	6.13	28
Healthcare Communication	51.48	10.31	43
Incorrect Treatment	3.52	1.38	4

Inferential Statistics

Preliminary analysis was performed on the data for normality, homogeneity of variance and linearity which indicated that one of the continuous variables did not follow the assumptions of normality. This variable was the total General Participant Experiences (GS-PEQ), therefore a non-parametric analysis was necessary. A Mann Whitney U test was conducted to compare scores for the Total General Short Patient Experiences scores between males and females. There was no significant difference in the scores between males (*Md* =

31, $n = 88$) and females ($Md = 30$, $n = 31$), $U = 1366$, $z = 0.012$, $p = .990$. Results of the Mann Whitney U test failed to reject the null hypothesis, indicating that males and females did not score differently in regards to their general experiences with healthcare professionals.

An independent samples t-test was conducted to compare scores for Total Healthcare Communication Questionnaire between males and females. There was no significant difference found between male ($M = 51.94$, $SD = 10.59$) and female ($M = 51.32$, $SD = 9.63$) participants scores, $t(117) = -.286$, p = .776 two tailed. Results of the independent samples t-test indicated that males and females did not score differently in regards to the quality of communication with the appropriate healthcare worker.

An additional independent samples t-test was conducted for one factor within the General Patient Experiences questionnaire by individually, which asked participants if they felt they had received the incorrect treatment in any way according to their judgment. Levene's test for equality of variance indicated a non-significant results (p = 0.142), therefore, the data does not violate the assumption of homogeneity of variance. There was a significant difference found between female ($M = 3.36$, $SD = 1.39$) and male ($M = 3.97$, $SD = 1.25$), $t(58) = -2.24$, p = 0.029, two tailed. The magnitude of difference in the means (mean difference = -0.60, 95% *CI*: -0.86 to -0.03) was small (Cohen's $d = 0.46$).

To summarize, there was no correlation between general experience and healthcare communication between males and females. However, when looking at the incorrect treatment factor within the General Patient Experience questionnaire, it was found that there was a difference between the two groups at a significant level.

Discussion

In the current study, the association between gender and differences in experiences with healthcare workers, reported by individuals either diagnosed or suspected to have ADHD, was explored. The study sought to offer a greater understanding within an otherwise novel area in order to transfer it from conversations within online spaces to empirical measurement by examining the differences in general patient experiences as well as the quality of communication by the appropriate healthcare worker between males and females. The study also sought to determine if differences were present in whether participants felt they had received the incorrect treatment, dependent on their gender.

Result from the Mann Whitney U test found no difference between males and female participants total scoring for general experiences. This indicated that gender did not determine quality of general experience during the individuals time with the healthcare worker. These results did not support the first hypothesis, which predicted that differences in general experiences would be present between gender groups. This conflicts with previous research stating that women tend to have many negative experiences with certain healthcare workers in regards to mental and physical health conditions (Grundström et al., 2016).

Reviews of research studies aiming to explore the influence of gender on individuals encounters with healthcare professionals have found that many women are labelled overly sensitive, emotional, and even hysterical during their experience with some healthcare practitioners for physical ailments or mental health concerns (Samulowitz et al., 2018). This experience has been shown to be consistent within multiple areas of women's health such as chronic pain and other areas of physical and mental wellbeing, in which many are their physical or mental experiences are simply in their head (Borba et al., 2012). Qualitative studies exploring the individuals usage of mental health services found that many of the

female participants felt unsupported by the mental health professionals, with some failing to take personal needs and varying circumstances into consideration (Hamilton et al., 2016).

Results of the independent samples t-test conducted for this study on healthcare communication indicated that males and females viewed the quality of communication by the appropriate healthcare worker at a similar rate. This indicated that gender did not determine quality of communication during the individuals time with the healthcare worker. These results did not support the second hypothesis, which predicted that differences in communication would be present between gender groups. This also contradicts previous research findings such as negative attitudes and dismissive ways of speaking received from professionals found to be a common event experienced by woman during assessments involving their wellbeing, with many feeling as though their symptoms of certain conditions are not taken seriously (Lillrank, 2003).

Similarly to the first hypothesis, previous studies have found that many woman recall being treated in a rude and hasty manner during their encounter with certain healthcare professionals, as well as feeling as though their needs were not respected (Green et al., 2012; Lewis, 2020). For example, in cases of endometriosis, women reported poor communication with healthcare professionals, with many feeling as though their symptoms were not taken seriously (Denny et al., 2008; Ghai et al., 2020). As a result of this phenomenon, woman may remain undiagnosed with critical medical conditions. This consequence may also extend to mental or neurodevelopmental disorders such as ADHD, although it is not reflected within this study's findings.

However, as previously stated, analysis was conducted on item 9 of the general patients experience questionnaire exclusively, using an independent samples t-test, which asked participants if they felt they had received the incorrect treatment. Results of the analysis found a small positive correlation between gender and incorrect treatment, indicating

a relationship between the gender of the participant and whether they felt they had received the appropriate treatment by the healthcare worker. This was supportive of the third hypothesis of the study. This result was consistent with numerous studies findings that woman experiencing symptoms of ADHD may instead be diagnosed or treated for a mood or personality disorder, or another comorbid disorder with similar symptomology (Waite, 2010).

While comorbidities occur within disorders such as ADHD, it is found that frequently, behaviours that would otherwise reflect ADHD symptoms in woman, are regularly mistaken for disorders such as anxiety or depression alone, preventing accurate diagnosis and treatment (Quinn, 2005). Women with ADHD are viewed and treated for depression prior to their ADHD diagnosis more often than men, with many referred for psychiatric help due "emotional problems" before being assessed for ADHD at all (Klefsjö et al., 2020; Quinn & Madhoo, 2014). Our previous understanding of ADHD was that it is a predominantly male disorder, however researchers such as Faraone and colleagues (2000) have since suggested that rates of ADHD may be closer to equal within men and woman than we realize. This would suggest that many women still remain undiagnosed or are being treated for comorbid disorders rather ADHD itself (Lynch & Davidson, 2002; Waite, 2010). Importantly, findings are indicative of the need for further training in the distinguishing of ADHD from its comorbid or similar presenting disorders in woman (Nussbaum, 2011).

Practical Implications

As this study does not support the hypotheses that males and females have differences in general experience and quality of communication with healthcare workers in regards to ADHD assessments, it is suggested that research should perhaps focus on the increase in awareness on the differences in symptomology within males and females with ADHD amongst parents and teachers. Research using methods of bias measuring such as the IRAP has been used in recent years to measure the presence of gender bias amongst school teachers

in regards to students with ADHD, with findings concluding that many teachers are more likely to associate symptoms of ADHD with boys than girls (Nolan et al., 2021). Teachers play a crucial role in the identification of neurodevelopmental disorders during a child's early years, ensuring they receive the appropriate interventions to allow them to thrive academically and socially (Coles et al., 2010; Degroot et al., 2022). An increase in studies within this area may diminish the rates at which referral biases take place within childhood years. As previously stated it was, however, found that participants who identified as female felt as though they were given the incorrect treatment at higher rates compared to participants who identified as male, with a small positive correlation present. Considering the sample did not use clinical participants, individuals who took part were not questioned on whether they had received an ADHD diagnosis or not, with some given a completely different diagnosis or form of treatment. This could potentially be addressed in future research with participants within a clinical setting.

Limitations and Future Research

A strength of this study is that it attempts to provide further knowledge on an otherwise under discussed topic within an empirical setting. To the researchers knowledge, current studies have yet to examine the implications of differences in experiences with healthcare practitioners within those with suspected or diagnosed ADHD between gender groups, often under discussion within social media forums and rarely within empirical research. However, there are current limitations present within this study that must be considered.

Firstly, the gender identity of participants was majorly skewed, with almost 75% of participants within the study taking place in the study being woman and just over 20% identifying as male. While this does coincide with current research findings that females tend to be more willing to participate in research studies than males (Otufowora et al., 2021), a

favourable outcome for the studies demographics proportions would be a fairly equal representation of males and females. As this is not the case, it can be hypothesised that a potential for a significant outcome would be present had the gender of participants been closer to equal.

Secondly, participants were not asked to specify the particular healthcare worker they were referring to in regards to their experience. Had this been a factor within the study, analysis may have been conducted on the differences between cases of referrals, and psychologists and psychiatrists on the bias within these sectors while working with participants with potential ADHD.

Thirdly, as the questionnaires used within the study relied totally on the recall method, with some participants potentially recalling their experiences from a long time ago, some memories of their experience may not totally be authentic in comparison to if the survey as taken right after the encounter with the healthcare professional.

For future research of this study's hypotheses, it is suggested that participants are also asked to state their current place of residency. This is in order to identify any geographical differences in the experiences of individuals with healthcare workers. The researcher would also like to propose that a similar study be tested using participants within the healthcare sector, specifically those specialising in the diagnosis of ADHD, using a bias identifying apparatus such as the IRAP.

Conclusion

The study found no significant relationship between gender and patient with potential ADHD self reported experiences with healthcare professionals, as well as no significant relationship within self reported communication between patient and the healthcare professional. Though few research studies available have suggested that there is a correlation between gender and negative healthcare experiences, there have been increasing amounts of

studies suggesting that the gender differences within numbers of referrals for ADHD assessment may be due to the referral bias during childhood years, despite little difference in symptoms with ADHD subtypes (Biederman, 2005; Coles et al, 2010). Further studies may benefit from closer inspecting this referral bias in regards to late recognition of women's ADHD. While this research was a novel attempt to find correlation between the gender and treatment of individuals with ADHD within a healthcare setting using participants recalled experiences, future research may benefit from studying healthcare practitioner's implicit biases directly, using apparatus such as the IRAP. To conclude, addressing the potential gender bias within ADHD diagnosis and treatment may benefit from a multi-pronged approach involving the provision of education and training within clinical, educational, and home environments in order to promote a more inclusive and supportive environment for women with ADHD (Bruchmüller et al., 2012; Nussbaum, 2011).

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Appendices

Appendix A

Participant Information form

Background and purpose of the study

Literature and studies conducted of the topic of ADHD has typically centred around the male experience and has only recently been catching up with knowledge on experiences with ADHD for the opposite sex. Little information is available on investigations done specifically on experiences of potential bias or standard of experiences based on gender for individuals suspected to have ADHD. The aim of the current research is to broaden the knowledge about the experiences of people with ADHD or suspected to have ADHD, both male and female, younger and older and in turn hopes to reduce the stigma around typically female and older individuals symptoms to increase supports, interventions, and bias training in healthcare services.

Results of this study will be used with my thesis for my BA Psychology degree at National College of Ireland.

Who can take part in the study?

Only those over the age of 18 and are capable of reading and understanding English will be asked to take part in this study as this survey will not be available in any other language. A formal diagnosis of ADHD is not asked for nor necessary however this study will be researching experiences within the health environment in regards to receiving assessment and/or access to mental health interventions for symptoms. Thus, those without this sort of experience are encouraged not to take part. If you suspect you have ADHD but do not have a formal diagnosis, you are welcome to take part in this study. If you have a formal diagnosis of ADHD, you are welcome to take part in the study. There are no age or gender exclusion criteria for this study.

What are you expected to do?

Before your participation you will be expected read and understand this document as well as a fill out a consent form before continuing the study which will be provided to you on the next page. This study will take approximately 15-20 minutes to complete however you may take as long as you need to fill out questions. It is asked that you read each question carefully and answer as honestly as possible. You will be asked to answer a seven-item questionnaire consisting of statements on scales of agreement (strongly agree-disagree) and frequency of experience (never- very often) which includes questions in regards to your personal experience of attitudes of healthcare professionals and general practitioners when seeking assessment of interventions for ADHD symptoms as well a 6 item scale questioning your personal experience with symptoms of ADHD using a scale of frequency of experience (never- very often). Please note that all answers are anonymous, and you will not be asked to inform any information that can be used to identify you.

What will happen to my data?

Upon pressing the submit button to conclude your participation of the study within the questionnaire your data will be submitted to myself, the researcher and will be used within my dissertation on the topic. This study will be submitted for examination and findings which may include your data will be presented orally at the end of the research study. All data will be secured in a password protected google drive which only the academic supervisor and myself, Lauryn Larkin, will have access to. We wish to inform you that all data will be held for a period of 5 years as suggested by NCI's data retention policy in the case of any possibility of publication of the study, after which your data will be deleted. Please be aware that your data collected may appear in future publications or further research, however survey data collected such as age and gender will be non-identifiable in any case. While every effort is made by the researcher to maintain anonymity of participants, confidentiality cannot

always be guaranteed, and data collected from participants may be subject to subpoena, mandatory reporting, or freedom of information claim. Should you decide you do not wish to commence with the study or want to terminate participation at any point up until submission of your data please exit out of the tab to close the study. Your data will not be submitted to the researcher in this case.

Right to withdraw

Every participant has the right to withdraw from the study, before commencing, during or just before submission. Upon withdrawing from the study before the submission point, any information obtained will be deleted and will not be obtained by the researcher. Participants must be made aware that data cannot be deleted after the point of submission as all data is anonymised and the researcher will be unable to retrieve a specific participants data. If you wish to withdraw at any point before submission, please close this survey from your device.

How will this study benefit me?

Participants engaging in this study will be contributing to research which may possibly result in an increase of awareness of female experience with ADHD in an aim to de-stigmatise this area of mental well being.

What are the potential risks of participation?

This research may ask participants to recall what can be distressing experiences which may lead to feelings of anxiety or depression. However, these risks are considerably low as there is no explicit or graphic content present within the study. If you feel you may be at risk to these feeling of distress it is advised to refrain from participating. Should you choose to continue and find your self experiencing these feelings of distress during the study please exit the study by closing the tab and feel free to contact the researcher at x20340576@student.ncirl.ie for additional support or information. If you have felt negatively affected by the topics discussed within the survey and wish to contact an

independent support, text 50808 text support service as well as The Samaritans support service at 116-123 for those experiencing emotional distress or mental crisis. Alternatively, ADHD Ireland hosts a number of support groups for those struggling with their symptoms of ADHD and can be contacted via telephone at 01 8748349, email at info@adhdireland.ie or visit their website at adhdireland.ie.

If you have any further questions or concerns about the current study not formally discussed in the briefing or debriefing forms and would like to contact an independent person, please contact: National College of Ireland Research Ethics committee, National College of Ireland, Dublin 1.

Appendix B

Consent form

Please read the consent form carefully before proceeding with your participation.

I as a participant willingly consent to take in part in the research study presented.

I understand that my agreement to participate now does not affect my right to withdraw from the study at any point up until submission of my survey data, without specifying any reason for doing so.

I understand that my data may be used in further research and may potentially published for public view

I understand that there will be no direct benefits given for my participation

I understand the nature of the study and the research question being studied

I understand that participation involves answering a number of rating style questions

I understand that all research provided by me during the course of this study will be strictly confidential

I understand that information I provide will be non-identifiable but that my data may be subject to subpoena, mandatory reporting or freedom of information claim.

I understand that extracts of my answers may be quoted in the form of a dissertation or published literature.

I understand that I have right to access my information at any point under the freedom of information legislation

I agree that I have read the briefing and consent form carefully and wish to proceed with my participation in this study

Required Question *

By ticking this box, I acknowledge that I have read and agreed to the information provided above and consent to participate in this study

Appendix C

Demographics Questionnaire

Please state your gender identity

- Female (including trans)
- Male (including trans
- Prefer not to say
- Other (please specify)

Please state your age in numbers (e.g. 21)

Do you suspect you have ADHD or have been diagnosed with ADHD

- Yes
- No

Appendix D

6 Item Adult ADHD Self-Report Scale

Please answer the questions below, rating yourself on each of the criteria shown. As you answer each question, tick the box that best describes how you have felt and conducted yourself over the past 6 months.

1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often
3. How often do you have problems remembering appointments or obligations?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often

4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often
5. How often do you fidget or squirm with your hands or feet when you sit down for a long time?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often

Appendix E

General Patient Experience Questionnaire (GS-PEQ)

The next portion of the survey will contain questions in regards to your experience of healthcare professionals including general practitioners when referring to your potential symptoms of ADHD. Please answer all questions**.**

1. Did the professionals talk to you in a way that was easy to understand?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

2. Do you have confidence in the professionals skills?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

3. Did you receive sufficient information about your potential diagnosis/ affliction?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

4. Did you perceive the care or treatment as adapted to your situation?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

5. Were you involved in decisions regarding your treatment?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

6. Did you perceive the institutes work as well organized?
   - Strongly Disagree
   - Disagree
   - Neither agree nor disagree
   - Agree
   - Strongly Agree

7. Did you have to wait before you were admitted for services at the institute?
   - Strongly Disagree
   - Disagree

- Neither agree nor disagree
- Agree
- Strongly Agree

8. Overall was the help and treatment you received at the institute satisfactory?

- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree

9. Do you believe that in any way you were given incorrect treatment (according to your own judgement)?

- Strongly Disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly Agree

Appendix F

Healthcare Communication Questionnaire (HCCQ)

Within this section, please indicate extent to which you experienced each of the following during your discussion/s with the healthcare professional in regards to your potential symptoms of ADHD.

1. The healthcare professional maintained eye contact
    - Not at all
    - Rarely
    - Somewhat often
    - Often
    - Very often
2. The healthcare professional respected my needs
    - Not at all
    - Rarely
    - Somewhat often
    - Often
    - Very often
3. The healthcare professional provided clear requests
    - Not at all
    - Rarely
    - Somewhat often
    - Often
    - Very often
4. I was asked questions in an aggressive manner -reversed
    - Not at all

- Rarely
- Somewhat often
- Often
- Very often

5. The healthcare professional gave clear information

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

6. I was given answers in an aggressive manner -reversed

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

7. The healthcare professional treated me with kindness

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

8. I was treated in a rude and hasty manner- reversed

- Not at all
- Rarely

- Somewhat often
- Often
- Very often

9. The healthcare professional addressed me with a smile

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

10. The healthcare professional helped solve my problems

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

11. The healthcare professional was able to manage the consultation

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

12. The healthcare professional kept a calm approach

- Not at all
- Rarely
- Somewhat often

- Often
- Very often

13. The healthcare professional showed respect for my privacy

- Not at all
- Rarely
- Somewhat often
- Often
- Very often

Appendix G

Debriefing Form

Thank you for taking part in this research in investigating the association between gender and patient experiences in those with suspected ADHD.

Your participation in this study has been greatly important to the expansion of knowledge on the topic of gender and support for woman and older individuals with diagnosed or suspected ADHD.

Please read this debriefing form carefully as it contains important information in regards to your partaking in this study. Upon reading this form you may choose to submit your survey data, or simply close the link to end the session. In this case your data will not be collected and used with the research study.

Right to withdraw

As previously stated in the initial briefing form, you as a participant have the right to withdraw from this study at any point up until submission. Due to the anonymity of this study participants data cannot be withdrawn from the study by the researcher upon submission of their data. If you wish to withdraw from the study, you may do so now by exiting this link.

Confidentiality and data protection

Every effort will be made in order to ensure all data provided by participants is protected and sorted securely. Any data collected during the study will be secured in a password protected google drive which only the academic supervisor Conor Nolan and myself, Lauryn Larkin, will have access to. We wish to inform you that all data will be held for a period of time of 5 years as suggested by NCI's data retention policy in the case of any possibility of publication of the study, after which your data will be deleted. Please be aware that your data collected may appear in future publications or further research, however survey data collected such as age and gender will be non-identifiable in any case. While every effort is made by the

researcher to maintain anonymity of participants, confidentiality cannot always be guaranteed, and data collected from participants may be subject to subpoena, mandatory reporting or freedom of information claim.

Privacy notice

While the primary researcher, Lauryn Larkin, remains the holder and processor of all data provided, National College of Ireland is the Data controller. NCI's data protection officer Niamh Scannell can be contacted via email at dpo@ncirl.ie should any concerns arise about the use of data or to request the retrieval of data. Additionally, participants can contact the primary researcher Lauryn Larkin via email at x20340576@student.ncirl.ie, as well as the academic supervisor Conor Nolan at conor.nolan@ncirl.ie. Participants have the right to make a complaint to the Irish Data Protection Commission should they feel data is being misused or incorrectly secured.

Further Support

If you have felt negatively affected by the topics discussed within the survey and wish to contact an independent support, ADHD Ireland hosts several support groups for those struggling with their symptoms of ADHD and can be contacted via telephone at 01 8748349, email at info@adhdireland.ie or visit their website at adhdireland.ie. Alternatively, text 50808 text support service or the Samaritans support service at 116 123 for those experiencing emotional distress or mental crisis. If you have any further questions or concerns about the current study not formally discussed in the briefing or debriefing forms and would like to contact an independent person, please contact: National College of Ireland Research Ethics committee, National College of Ireland, Dublin 1.

Appendix F

Proof of Analysis