Using Social Media For ADHD Education and Advocacy: A Case Study of Mental Health Influencer Dr. Ned Hallowell

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ABSTRACT

Attention Deficit Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder that occurs in childhood and probably persists throughout adulthood. The ADHD community suffers from discrimination and stereotyping due to the mixed and unprofessional media content with low quality. Additionally, there is currently limited research on ADHD related content published on social media from a positive perspective. Ned Hallowell, the worldwide leading expert and psychiatrist on ADHD, is playing the role as Key Opinion Leader (KOL) in the field of ADHD, actively promoting the positive characteristics of ADHD and advocating to reduce stigma and prejudice around mental health issues on his social media platforms by appealing strengths-based conceptions. This article employs Ned Hallowell as a case study, utilising qualitative content analysis to synthesize the content disseminated on his various social media platforms, encompassing Facebook, Twitter, Instagram, and TikTok. Employing the study's KOL framework, the findings reveal how Hallowell exemplifies the capacity of KOLs to strategically reframe the narrative of ADHD through a positive lens. Hallowell's social media posts draw attention to positive ADHD traits such as creativity, humour, and enthusiasm. By embodying the characteristics of an effective KOL, Hallowell's social media posts advocate for a strengths-based perspective of ADHD that transcends mere awareness and destigmatization to foster a narrative of acceptance and celebration of unique ADHD potentials.

Keywords: Mental Health Influencer (MHI); ADHD; Key Opinion Leader (KOL); Ned Hallowell; Social Media

INTRODUCTION

As an integral part of daily routines, social media has a significant impact on mental health by opening new avenues for social experiences and expanding communication possibilities

(Zsila & Reyes, 2023). Social media is considered to increase individuals' awareness and participation in public affairs, which helps to affect audiences' opinions and behaviours (Nunkoo et al., 2023). Social Media Influencers (SMI) play a crucial role as content providers in the information environment with considerable followers, motivating young people to learn more about health-related topics (Gell et al., 2023). Similarly, within health communication, Mental Health Influencers (MHI) are professionals who use social media to directly share health related information (Triplett et al., 2022), although there are many MHIs who are not mental health professionals themselves. Distinguishably different from SMIs who are typically associated with brand endorsements, MHIs build followers by publicly sharing their professional observations and insights with clients or patients in a treatment environment (Cooley & Parks-Yancy, 2019). Stigma among individuals with mental health issues is a pervasive public health issue (Samari et al., 2022), and it is commonly cited as a significant factor hindering individuals from seeking professional mental health assistance and treatment (Subramaniam et al., 2020). Young people with ADHD are often marginalized, which affects their integration into society and causing social withdrawal (Lutz-Fritz & Hast, 2023; Ruijne et al., 2022). The stigmas and biases may exacerbate harmful life outcomes for individuals and lead to poor quality of life (Degnan et al., 2021).

ADHD is commonly conceptualized as a neurodevelopmental disorder; however, an alternative perspective exists within the context of neurodiversity, which presents ADHD as a variation rather than a disease. A growing number of ADHD influencers who focus on ADHD awareness and public education are leveraging on social media platforms to disseminate and articulate affirmative perspectives, generating innovative approaches aimed at mitigating stigma associated with ADHD and other neurodevelopmental conditions. They perform a positive function in raising the awareness of people with ADHD by sharing their professional knowledge of ADHD, their personal experience of living with ADHD, and how to explore meaningful lifestyles. Dr. Ned Hallowell, a Harvard-certified psychiatrist and a foremost expert on ADHD, asserts that people with ADHD are the driving force of change who conceive and construct the world differently (Rigg, 2022). Through the establishment and operation of a website dedicated to providing public support for ADHD, Hallowell fosters a celebratory discourse surrounding the ADHD community on Facebook, Instagram, Twitter, and TikTok. This study examines the content of his social media platforms about adult ADHD, and explains the themes and attitudes revealed in the videos, words, pictures, and other information released. Despite being an ADHD social media influencer, Ned Hallowell's online presence remains under-studied in both mental health as well as social media research literature. Therefore, his case study provides a possibility to examine the media publicity strategies and skills of mental health influencers (Watters et al., 2018).

This study, grounded in a strengths-based perspective, addresses a gap in the existing literature on ADHD research within the realm of media and communication. By prompting an exploration of the positive impacts of ADHD traits in daily life and professional settings, this paper advocates for the recognition of diverse brain operating systems and neurodiverse modes of thinking. Using Ned Hallowell as a case study, the research delves into his efforts to enhance the self-psychological construction of individuals with ADHD and reduce discrimination through active promotion and psychological intervention. Serving as an exemplar for future positive ADHD social media influencers, the study aims to elevate the quality of mental health related content, assisting the ADHD community in transforming negative emotions into positive initiatives by emphasizing strengths to develop a constructive outlook in facing neurodivergent brains.

Attentional Deficit Hyperactivity Disorder (ADHD)

Attention Deficit Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder that occurs in childhood and persists throughout life, with a prevalence of 3% to 5% in adults (Soler-Gutiérrez et al., 2023; Song et al., 2021). In relation to school and family factors, academic performance and campus interpersonal relationships of adolescents are obviously affected by ADHD (Akgün & Girgin, 2020), and children with ADHD rather than adults have received much more attention. The lack of criteria specifically for adults and the high comorbidity with other disorders make the diagnosis of ADHD much more difficult in adults who face mood dysregulation issues (Soler-Gutiérrez et al., 2023). Therefore, it is critical to develop unique resources that fit their specific needs and support neurodiversity (Ogrodnik et al., 2023).

Neurodiversity tends to focus on brain differences rather than deficits, and advocates different ways of creative thinking about work or school tasks (Kirby, 2021). Advocates hope this idea will expand our understanding of developmental disorders, including ADHD. Judy Singer, a sociologist with autism, began using the term "neurodiversity" in the late 1990s (Jan, 2020). It refers to the concept that certain developmental disorders are normal changes in the brain. People with these characteristics have certain advantages. People with ADHD may have difficulties in time management; however, they often show a high degree of enthusiasm, energy, and creative thinking. Impulsivity is considered a strength, as they will say things that others would not dare say (Wiginton, 2021). Given the widespread and rapid change of social media, it has had a profound impact on many aspects of society. Social media has gone far beyond its original purpose of contacting individuals, and has changed the communication mode of individuals, organizations, brands, enterprises, and governments (Lou & Yuan, 2019). It not only becomes a new way of self-expression, but also allows individuals and organizations to reach new audiences and change the world around them. Opinion leaders appearing in social media have a direct and extensive impact on the ADHD group (Crane et al., 2021). Their views and ideas are published and magnified infinitely through the digital platforms, which has a significant effect on guiding ADHD people in need of assistance to reasonably build an inner positive framework and pursue a new lifestyle (Kang et al., 2017).

According to Feedspot, a content reader that integrates resources from blogs, news sites, RSS feeds, YouTube channels, and social networking accounts, there are several ADHD expertise accounts on social media platforms and online electronic databases. Different from the personal social accounts of ordinary people and ADHDers, these institutions or authorities analyse and explain ADHD from a professional perspective, and the content released is more persuasive and credible. Ned Hallowell stands out as one of the most successful and authoritative experts who has dedicated himself to the destigmatization of ADHD. He is arguably the top figure among all ADHD health professionals on social media.

Edward 'Ned' Hallowell

As both a board-certified psychiatrist and a person with ADHD, Ned Hallowell is in a unique position as a neurodivergent MHI, namely as an ADHD influencer. By actively exploring and elaborating on the potential strengths of ADHD symptoms and characteristics, he overturned the popular traditional definition of ADHD as a disease. Based on the emphasis on advantages, diversified thinking modes are developed (Clouder et al., 2020). By actively stimulating the ADHD population, on the one hand, the adult ADHD community is encouraged to build a self-awareness system. On the other hand, the inherent prejudice and stereotype of the

society on ADHD could be reduced. For instance, actively guiding some characteristics of ADHD will bring advantages and jumping thinking can stimulate creativity and originality. This is the approach he has taken in treating children and adults with ADHD for the past 40 years (Rigg, 2022).

Three characteristics namely Creativity, Humour, and Passion are considered as the unique strengths of people with ADHD. Multiple studies have illustrated that individuals with ADHD tend to exhibit higher creativity compared to those without such symptoms (Girard-Joyal & Gauthier, 2022; Hayashibara et al., 2023). The ADHD population may experience enhanced creative achievements in practical settings driven by goal-oriented motivation, as posited by Boot et al. (2020). Several studies have identified a notable sense of humour in individuals with ADHD as a potential coping mechanism for navigating stressful social situations (German, 2021; White & Shah, 2011). Lindman (2023) suggests that individuals with ADHD may possess a more developed sense of humour compared to their peers. Other traits associated with ADHD, including passion and enthusiasm, are emphasized as unique strengths within the ADHD population (Lauder et al., 2022). Research by Hatak et al. (2021) demonstrates that the passionate qualities of ADHD individuals play a crucial role in achieving entrepreneurial performance and self-worth, particularly benefiting entrepreneurs who may lack strong positive awareness.

Hallowell has published more than 20 books on psychology and ADHD, and is a best-selling author on New York Times (Kessler, 2023; Peters, 2012). In 1994, the groundbreaking Distraction Series triggered a revolution in the understanding of ADHD around the world with the book Driven to Distraction. Through his interviews on various media platforms such as CNN, The New York Times, Oprah, and Time Magazine, he has garnered a sustainable following by means of his professional expertise and constructive mindset, including not only individuals with ADHD, but also neurotypical enthusiasts (Kessler, 2022). Additionally, as a member of the ADHD medical review panel, he received the 2018 Mental Health Awareness Leader Award from the National Psychiatric Alliance. Hallowell operates a website offering public ADHD support and actively promotes and celebrates the ADHD community, concurrently maintaining a presence across Facebook, Instagram, Twitter, and TikTok. Notably, he has more than 25,000 followers on his Facebook platform. Distinct from personal profiles, Ned Hallowell's Facebook account has been established and is operated as a professional mental health service organization. His Twitter account has a similar follower count to his Facebook, i.e., exceeding 20,000 followers. Remarkably, Hallowell engages not only with academic authorities, discussing the strengths and characteristics of ADHD, but also fosters meaningful dialogues with the public by actively soliciting their perspectives, attitudes, and coping strategies related to ADHD. This personable communication approach bridges the gap among his followers, breeding a conducive environment for the educational promotion of ADHD through real-life examples. Additionally, Hallowell frequently posts contents on TikTok for further dissemination and outreach. It is surprising that the content published on his Instagram is highly synchronized with Twitter, especially in the live broadcast preview and introduction of Facebook. A considerable portion of the promotional content related to the new book "ADHD 2.0" is featured on Instagram. Utilizing visual media such as images and videos, the dissemination effectively communicates the widespread popularity of the book, guiding the audience to delve more profoundly into the captivating realm of ADHD. TikTok, emerging as a novel social media platform, has greatly enhanced its role in media publicity. Even though Hallowell debuted his first video on TikTok on

September 23, 2020, he has garnered nearly 170,000 followers shortly after. Among these videos, he employs a thematic or question-oriented approach to convey positive messages to the public, instructing them on how to transform the notable characteristics of ADHD into advantageous factors that facilitate progress in both life and work. Diverging from the other three social media platforms, his personal life status is exclusively documented here through short videos, offering the audience an intimate and direct psychological experience that builds a closer sense of connection. The advantage-based ADHD strategy given in the video is of great educational significance.

Conceptual Framework

The term Key Opinion Leader (KOL) originated in the 1940s from the research of communication theorist Paul Lazarsfeld on public influence, wherein he expressed skepticism towards mass media's direct impact on public opinions (Sismondo, 2015). Defined as respected sources of information serving as trusted members within a community (Crane et al., 2021), KOLs utilize their interpersonal communication skills to influence others' decisions (Carpenter & Sherbino, 2010), taking advantage of their social influence to enhance the relevance, acceptability, and credibility of initiatives (Flodgren et al., 2019). KOLs typically represent a high degree of similarity between two individuals and high homogeneity with other community members (Rogers et al., 2019). By facilitating online dialogues or sharing content through digital channels, KOLs have become prominent leaders in the digital domain, serving as key influencers on the Internet by promoting achievement and influencing goals (John & Mary, 2022). Audiences may choose to follow KOLs who are similar to themselves on social media, imitate their behaviours, and adopt their advice(Yao et al., 2022). For KOLs, the best qualities extend beyond merely scientific knowledge or original innovative work; they also encompass contributions to recommendations (Scher & Schett, 2021). While KOLs may not necessarily engage in experimental innovation, they must involve themselves in pioneering new ideas and practices (Carpenter & Sherbino, 2010).

KOL is widely utilised as a conceptual framework in researching content disseminators' strategies and their impact on audiences in terms of health issues. Nelson (2019), in conjunction with effective strategies employed by KOLs in health communication, identified their role in augmenting and amplifying the quantity and scale of health information dissemination. Flodgren et al. (2019) regard KOLs addressing health-related issues as trusted and knowledgeable community members, analysing their utilization of social influence to enhance the credibility and acceptability of pertinent initiatives. Crane et al. (2021) explored the positive contributions of KOLs in the medical and health domains, proposing their potential in enhancing health promotion activities and serving as dissemination strategies for expanding evidence-based interventions. Support and encouragement from others facilitate individuals in seeking treatment and reducing stigma, with such encouragement being particularly influential when emanating from KOLs (Flodgren et al., 2019). Particularly in an era of information overload, allowing KOLs to express support for a concept can potentially facilitate meaningful modifications in group practices (Carpenter & Sherbino, 2010). Therefore, KOLs, especially experts in the field of health, constitute vital factors in influencing the dissemination of accurate information, as KOLs possessing health communication capabilities can effectively convey perspectives. Given the amplifying capacity and resource-accelerating function of social media, this opinion-based influence has garnered further attention (Scher & Schett, 2021).

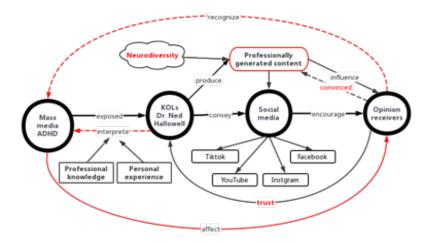


Figure 1. Conceptual Framework Design (Made by Writer)

This paper examines the social media posts of a key online opinion leader, or online KOL within the neurodivergent ADHD community, namely Ned Hallowell. The conceptual framework is depicted in Figure 1, elucidating how Ned Hallowell influences the attitudes and perceptions of the public towards ADHD by curating and disseminating professionally generated content through social media platforms. Existing knowledge regarding ADHD is abundantly available through various resources, and any citizen, irrespective of their professional and objective judgment, can openly access ADHD health information on major media platforms. Drawing upon years of accumulated personal experience and professional expertise in the field of psychology, Hallowell re-analyses and reinterprets the characteristics of ADHD from a strengths-based perspective. He advocates for the positive psychological construction to reinforce the promotion of typical ADHD features. These novel insights and viewpoints, through repetitive dissemination, permeate the realm of social communication, occupying a significant position. In his role as a KOL, Hallowell acts as a nexus by integrating ADHD resources, generating professional content, and releasing it to the public through social media platforms. The content revolves around the fundamental principles of neurodiversity, accentuating the strengths of ADHD. By advocating for the respect and embracement of diverse modes of thinking and operations, the aim is to alter public biases and stereotypes about ADHD. Hallowell encourages individuals with ADHD to bravely and positively confront challenges, discover their strengths and unique traits, and transform them into driving forces for individual development and progress.

Whether dealing with ADHD or neurotypical individuals, exposure to professionally generated content and core arguments based on strengths significantly influences their perspectives. Due to Hallowell's robust professional qualifications and reservoir of expertise, the audience exhibits a sense of trust in this KOL. The increase in his number of followers serves as positive feedback and propels Hallowell forward on the path of advocating for a strengths-based perspective on ADHD. The spirit advocated by neurodiversity, emphasizing respect and embracement of differences, provides a rich reference for the construction of psychology and plays a catalytic role in shaping the societal atmosphere. When society is no longer dominated by prejudice and discrimination, the rights of individuals with ADHD

and other minority groups could receive more attention and protection. Considering this, the paper will analyse Ned Hallowell's depiction of the strengths of ADHD.

RESEARCH METHOD

As one of the most widely utilized analytical tools in contemporary research, content analysis has proven to be effective across a diverse range of applications within the field of information. In recent decades, content analysis has predominantly serve as a quantitative research method, and there is a growing trend towards employing qualitative content analysis to address certain limitations inherent in the former approach (Lindgren et al., 2020). Qualitative content analysis has been defined as a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns (Lichtman, 2023). It is an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification (Marvasti, 2019).

Different from the traditional quantitative content analysis, qualitative content analysis aims to explore the meaning behind the information and draw inferences from the content based on the exploration of the themes in the data with the inductive concept. In terms of data and sample selection, qualitative content analysis usually consists of purposeful texts, which can provide information for the investigated research questions, as well as the theme of how they view the social world is expressed in descriptive words or typology. Through this method, researchers and readers of the research findings can better understand the views of the text producers.

This study focuses on Ned Hallowell, examining the dissemination frameworks and strategies employed in the content he publishes on his social media accounts. Although a group of ADHD experts with professional quality and knowledge have emerged in various social media platforms, this research is a case study of Ned Hallowell's social media influencer works and therefore only examines his social media universe through his Facebook, Twitter, Instagram, and TikTok accounts. Considering the timeliness and availability of information resources, this paper frames the research object in Ned Hallowell's four personal social media platforms namely Facebook, Twitter, Instagram, and TikTok. The study does not include analysis of his website, books, media appearances, or other platforms which he may use or is featured in.

DATA COLLECTION

Ned Hallowell operates a website providing professional services and information on ADHD, which is linked to various social media accounts (Table 1), which can be reached by clicking on the corresponding icons. Samples from social media accounts are publicly accessible resources, ensuring the achievement of all anticipated search objectives. Given the varying growth rates and entry times across different social media platforms, Hallowell's presence on these platforms differs. This study, based on data from various platforms, aims to ensure an equal and comprehensive coverage of all contents within the specified sample. Considering the low posting frequency and overall limited quantity of posts by Hallowell, this study employs inclusion and exclusion criteria for the measurement of all publicly available data as of December 2022.

	Facebook	Twitter	Instagram	TikTok
Founded	November 2009	April 2009	August 2017	October 2019
Follower No.	25,000+	20,000+	27,000+	170,000+
Туре	Official	Personal	Personal	Personal
Linkage	Yes	Yes	Yes	Yes
Contact Method	Phone/ Email/ Portable chat	Comment	Comment	Comment
Content	Live preview/ Expert interaction/ Scientific information	Book publicity/ Lectures/ Audience reply/ Interviews	Book publicity/ Expert interaction/ Audience reply/ Strategies	New concept/ Strategies/ Suggestions/ Personal life
Form	Picture/ Video/ Link	Picture/Video	Picture	Short video

Table 1. Ned Hallowell's Social Media Presence (as of December 2022)

INCLUSION AND EXCLUSION CRITERIA

Aligned with the objective of exploring the positive traits of ADHD on social media in this study, the inclusion and exclusion criteria for conducting thematic analysis are as follows. Firstly, posts should appear in combination of text and pictures or videos. Secondly, the literal information presented in posts content should be related to ADHD or personal experiences, such as introductions, diagnoses, coping strategies, or insights. Live streaming announcements and feedback are excluded from this study. Thirdly, posts content should clearly manifest positive textual or visual expressions such as encouragement guidance and evaluations of ADHD or images and videos that evoke a sense of pleasure. Fourthly, posts are focused on the main positive ADHD strengths identified above: creativity, humour, and passion.

FINDINGS

A qualitative analysis of Ned Hallowell's writings and social media offers several interesting insights into his social media content messaging, his audience engagement, and his digital advocacy strategies. Three prominent themes emerged from the analysis of Hallowell's social media content. This article focuses on one of Hallowell's core ideas - "ADHD as a Spectrum of Abilities". The qualitative content analysis of his posts across various social media platforms aims to investigate how he portrays ADHD as a positive attribute and expands upon this concept. It also explores how he uses social media to integrate ADHD into individual personalities, families, social dynamics, and other areas.

ADHD as a Spectrum of Abilities

Despite the challenges, Ned Hallowell underscores the inherent strengths and potential of individuals with ADHD, advocating an empowering and positive narrative. Positive attributes

in areas like creativity, passion, and humour can assist them in achieving success in suitable environments. Hallowell encourages the public to recognize these positive characteristics displayed by the ADHD community and to foster the amplification of these strengths during their developmental processes. ADHD could be regarded as a neurobiological difference associated with unique talents and advantages rather than a deficit. Both individuals with ADHD and other societal groups should focus on and emphasize the superiority of ADHD traits. This is particularly crucial for educators and parents, highlighting the importance of cultivating positive traits and harnessing their impact rather than confining attention to deficits. Our qualitative content analysis reveals that Ned Hallowell discusses the positive features.

Creativity and Innovation

Hallowell believes that people with ADHD are usually more likely to think in non-traditional ways and produce unique solutions to problems. Their brains are often full of creativity and innovation, which have terrific value in various fields. He gave examples of numerous outstanding inventors, artists, and entrepreneurs whose creativity and innovative spirit have helped them achieve extraordinary achievements despite having been diagnosed with ADHD, or suspected to have ADHD. He emphasizes that it is precisely because the strengths and characteristics of ADHD are effectively utilized and explored that they are able to become forerunners in their fields and achieve astounding success. He has discussed the following on social media:

"How hard it was for people to believe that some of the greatest contributions to human civilization were actually deemed stupid as children." (Figure 2)



Figure 2. Screenshot of Ned Hallowell's Twitter Post on February 19, 2022.

In addition, the creativity of people with ADHD have been mentioned multiple times on his social media platform as well. He believes that one of the traditional characteristics of ADHD, "hyperactivity", is one of the noteworthy features that has the potential to be transformed into positive traits. Unlike traditional medicine and the general public's perception of "hyperactivity", he advocates impulsivity as the foundation and prerequisite for creativity. ADHD people are adept at thinking about problems in unusual ways, and their jumping and rapid thinking enable them to propose novel perspectives and solutions. This unique way of thinking contributes to creative problem-solving and drives innovation. The curious trend

and passion for new things drive the ADHD population to explore new fields, combining ideas and concepts from different fields to seek new inspiration and generate innovative thinking. The specific discussion on this topic in social media is as follows:

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"Do you think so? I don't - at least not all the time. I think Creativity is Impulsivity gone right!" (Figure 3)

Figure 3. Screenshot of Ned Hallowell's Facebook Post on December 9, 2016.

"Creativity is impulsivity gone right. Encourage it in your child and use it yourself. Most kids with #ADHD don't do things the 'normal way'. Don't feel bad about this!" (Figure 4)



Figure 4. Screenshot of Ned Hallowell's Facebook Post on December 19, 2018.

In summary, the ADHD community may be full of courage towards risk and adventure, which encourages them to challenge tradition and pursue innovative methods and creative solutions. ADHD individuals have outstanding creativity, and their way of thinking and unique characteristics make them a powerful force for problem-solving, innovation, and creativity. This creative ability is worth encouraging and supporting, as it helps enrich society and various fields around the world.

Humorous Social Skills

Innate sense of humour is also one of the ADHD features advocated by Ned Hallowell and has been well demonstrated on his social media platform. He believes that people with ADHD are often known for their sense of humour, which as a positive trait can be expressed in social interactions, making them interesting and likeable companions. They are often very witty and possess the ability to be liked, which makes them remarkably successful in social interactions. He encourages people to see this positive aspect as part of ADHD. People with ADHD typically have fast thinking and creativity, which enables them to view the world in a unique and interesting way. They may notice details that others overlook and turn them into humorous elements. This rapid thinking and observation ability enables them to generate comments and jokes that make people laugh. On Ned Hallowell's social media, it is common to see him posting humorous pictures or text. In a Facebook post promoting his new book, he took a photo of him and his wife reading a book with a dog, accompanied by the text:

"So easy to read even Max was gripped! My latest book is now out in paperback. It's around 100 pages, full of practical tips and science and less than \$20." (Figure 5)



Figure 5. Screenshot of Ned Hallowell's Facebook Post on January 19, 2022.



Figure 6. Screenshot of Ned Hallowell's Facebook Post on March 9, 2013.

By emphasizing the unique promotional approach of reading dogs, coupled with their exaggerated and comical expressions, he creates a humorous atmosphere for the audience. The combination of text and animal images has the effect of emitting humour (Figures 5 and 6). Although animals themselves may not necessarily have a true sense of humour, their behaviour and expressions can sometimes make people laugh. The reason these animal images have become laughter points on social media and the Internet and are shared by audiences is because their sense of humour and cute moments can make us laugh, reduce stress, and increase happiness. This sense of humour is a valuable resource for the ADHD community, reminding us to maintain a relaxed and happy attitude in life.

In addition, people with ADHD typically approach their own traits and challenges in a self-deprecating manner. This self-deprecation is a positive coping mechanism that enables them to view themselves with humour, alleviate harsh criticism of themselves, and establish easier interactions with others. This sense of self-deprecating humour stems from their

understanding of their own shortcomings and challenges, and their ability to easily express the problems they face in life in a playful way without feeling inferior or hurt. This selfdeprecating ability enables them to manage demanding situations in life while also making others feel relaxed and comfortable. For example, ADHD individuals may jokingly refer to themselves as "memory leaking like a sieve" or evaluate their brain as an "unstoppable advertising machine" that is constantly emitting random tangential thoughts. This humorous expression helps them establish better relationships with friends and family, as those around them can understand and empathize with their challenges. On Ned Hallowell's social media, his self-deprecating and humorous qualities are seen as follows:



Figure 7. Screenshot of Ned Hallowell's Facebook Post on August 29, 2013.

"And those who were seen Dancing were thought to be insane by those who could not hear the Music." (Figure 8)



Figure 8. Screenshot of Ned Hallowell's Facebook Post on September 28, 2012. In the first picture, Ned attempts to be what others call a "normal person" but ends up with even worse failure. The current society is filled with prejudices and stereotypes about ADHD, and there are certain questioning voices which believe that ADHD is abnormal and pathological. He not only demonstrated his tentative attitude towards this controversial view through self-deprecation, attempting to explain the "abnormality" of ADHD, but also conveyed the message to the public in a humorous way, that if the ADHD population is forcibly transformed into "normal people" in the eyes of the public, the result will only become worse. The comical expressions and amusing hairstyle in the picture are typical manifestations of a sense of self-deprecating humour. The second image is a more intuitive display of the "crazy" characteristics of ADHD in the eyes of others. A horse with active jumping is seen by neurotypical individuals as dancing aimlessly, which seems crazy and abnormal. Ned effectively conveys various unconventional features of ADHD through self-deprecation, while also revealing the current situation and true feelings of the ADHD population.

Self-deprecation can help alleviate stress and anxiety, making it easier for people with ADHD to accept themselves. They may laugh about their "lost car keys" instead of feeling frustrated about these situations. This cheerful outlook helps to improve self-esteem and make them more confident in dealing with various challenges in life. Self-deprecation is a positive way of dealing with ADHD, which helps these people see the other side of challenges and difficulties, and deal with themselves in a relaxed and humorous way. Overall, the sense of humour in ADHD individuals is a positive trait that sets them apart in social interactions and adds joy to life. This sense of humour can become their advantage, helping them establish deep interpersonal relationships and improve quality of life. Although ADHD brings some challenges, a sense of humour is a positive way for them to cope with those challenges and enjoy life.

Passion for Pursuing Interests

ADHD people usually show strong passion and enthusiasm in the things they are interested in. This kind of interest and enthusiasm is their positive trait, which helps stimulate creativity and perseverance. According to Hallowell, ADHD individuals typically perform well in their areas of interest. He encourages attention to, and cultivation of, individual interests and passions, as they can demonstrate exceptional attention and perseverance when they are interested in a particular topic or task. People with ADHD often show high interest in certain themes or activities. When they are excited about something, they can demonstrate an exceedingly prominent level of attention and perseverance and devote most of their attention and energy to that passion. A love for life and an elevated level of enthusiasm can help maintain harmonious family relationships and promote personal and interpersonal growth, which is extremely common on Ned Hallowell's social media platforms. For example, his posts reveal his individual preference for meaningful celebrations, which is often closely related to family members. He posted the following on Christmas:

"As a child, Christmas was always my favourite holiday.... As an adult, I still love it, as does my wife and our three grown children. Even though they are full-fledged adults, they've retained their childlike enthusiasm for the holiday, as have my wife and I. Long may that enthusiasm endure, I say to myself, as we get ready to celebrate Christmas together as a family once again."

---December 25, 2021; Facebook.

The content of this post reflects his love and passion for important festivals from a young age. Ned Hallowell's family is also attracted by this strong interest in things, and their interest and enthusiasm often motivate them to put in more effort towards specific things, which may lead to better family relationships. People with ADHD often have a passion for things they are interested in, which can spread to other family members, stimulate their interest in various activities, and help enhance intimate relationships. Another post states:

"A wonderful treat to see a Broadway show in New York, especially when that show is the inspirational The Music Man with the magnificent and magical Hugh Jackman. It is easy sometimes to forget the importance of downtime or doing something fun with family. And of course, a high quality musical is wonderfully stimulating."

---April 22, 2022; Instagram.

In short, the interests and enthusiasm of ADHD people are a powerful driving force, filling them with vitality while pursuing goals and achieving success in various fields. Understanding and encouraging these positive traits can help improve their self-esteem and make them more confident in facing life's challenges. The positive qualities of ADHD should be valued, not just the challenges it brings. Hallowell's perspective encourages people to see the advantages of people with ADHD, recognize their potential in various fields, and adopt a positive attitude to support and encourage them to develop their talents.

DISCUSSION

These findings provide a comprehensive overview of Ned Hallowell's influence and impact in the digital space, emphasizing his unique approach to ADHD advocacy and the resonance of his messages. The support and encouragement from Hallowell can help the ADHD community seek treatment and reduce shame, allowing KOLs to express support for a certain concept and play a role in promoting meaningful modifications in group practice. As a KOL in the field of health, Hallowell is an important factor affecting accurate information dissemination. With his rich personal experience and professional knowledge, he analyses and interprets the characteristics of ADHD from an advantageous perspective, including creativity, humour, and passion. These positive psychological constructions and innovative insights, through repeated dissemination, penetrate the field of social interaction, changing public biases and stereotypes about ADHD.

In a world full of rules and structures, families with ADHD traits seem to have given birth to innovative genies. Their extraordinary brain operation fills them with unique ways of thinking and sparks of creativity. The ADHD community maintains vigilance towards everything around them in a broader and more sensitive way of thinking, allowing them to capture subtle details that others may overlook, which is one of the key elements of creativity. The creative information presented on Ned Hallowell's social media emphasizes that the brain of ADHD is constantly bursting with various ideas, as if driving on a highway with broad thinking. Several studies have confirmed that people with ADHD are more creative than people without such symptoms(Girard-Joyal & Gauthier, 2022; Hayashibara et al., 2023). Thinking collisions can lead to the emergence of unique ideas and creativity, and people with ADHD often mix thinking elements from different fields together to create stunning concepts and solutions. The ADHD population may make thoughtless decisions due to impulsiveness, but this impulsive decision making can also be harnessed for generating innovative thinking. People with ADHD may have improved their creative achievements in the real world driven by goal-oriented motivation (Boot et al., 2020). The creative and positive qualities advocated by Ned Hallowell are also reflected in the talent presented in specific fields. Girard-Joyal and Gauthier (2022) found that individuals with ADHD exhibit higher levels of self-assessment creativity and produce more original paintings in creative thinking tests.

Humour traits are well demonstrated in Ned Hallowell's social media content, and audiences are easily amused by his humorous language and comical illustrations. Humour, as a component of emotional cognition, is closely related to an individual's social skills and interpersonal communication level. The significant sense of humour in ADHD individuals may be used as a way for them to cope with stressful social situations (German, 2021). Hence, individuals with high ADHD symptoms are reasonably advised to use humour to help cope with daily stress. This finding was also mentioned in White and Shah (2011)'s study, where ADHD students exhibit a higher level of affinity, which supports the view that people with ADHD may have a more well-developed sense of humour compared to their peers (Lindman, 2023). However, Cunningham and Derks (2005) found a negative correlation between ADHD symptoms and sense of humour, as slow information processing caused by lack of concentration may interfere with adult humour comprehension.

The passionate characteristic of pursuing interests is mainly reflected in Ned Hallowell's social media, which focuses on family attention and close connections with loved ones. By pursuing common hobbies and interests, family relationships quickly heat up and become more harmonious and stable. The manifestation of this trait among people with ADHD also involves career, academic, and other aspects. For example, ADHD entrepreneurs demonstrate entrepreneurial performance when they experience a passion for entrepreneurship and growth (Hatak et al., 2021), indicating the significant role of passion traits in achieving entrepreneurial performance and self-worth. Entrepreneurs who attempt to develop their business and are highly enthusiastic, but lack a strong sense of positivity, can benefit from this ADHD trait. In another study, ADHD respondents also emphasized the advantages brought by their ADHD traits, including passion and enthusiasm (Lauder et al., 2022).

Ned Hallowell's expertise in ADHD and related attention issues, as well as his works and speeches, have made him an important KOL in the field of ADHD and contribute to the public's understanding of ADHD. Firstly, through social media and other means, Ned Hallowell spreads ADHD knowledge and education to the public. His professional knowledge and experience contribute to improving public understanding of ADHD and reducing misunderstandings and stereotypes. Secondly, Hallowell has established an extensive network of opinion leaders in the medical, psychological, and family education fields, which has the potential to influence other professionals and decision-makers, working together to improve the diagnosis, treatment, and support of ADHD. In addition, his advocacy for conceptual change has provided better self and social support for the ADHD community, and an open attitude and positive voice have helped reduce the stigmatization and isolation of ADHD patients and their families in society. Overall, Ned Hallowell, as a Key Opinion Leader in the field of ADHD, provides important support and information to ADHD individuals and their families, promoting greater awareness and understanding of ADHD, and reducing social biases related to ADHD.

CONCLUSION

This research focused on analysing the contents shared on Ned Hallowell's social media platforms regarding adult ADHD. It delved into the themes and attitudes portrayed through

videos, text, images, and other forms of information that were disseminated on these platforms and established Ned Hallowell's role as a mental health influencer promoting a more positive strengths-based perspective of ADHD. Contrary to the prevailing discourse on social media regarding ADHD, Ned Hallowell's personal social media presence serves as a positive model for ADHD social media influencers. Furthermore, his emphasis on ADHD's positive attributes channels perceived negatives into proactive initiatives, leveraging the unique features of ADHD to their fullest potential while accentuating their benefits. This shift in perception offers a positive approach to diminish the stigma associated with ADHD and enhance the overall quality of life for those affected. The limitation of this article lies in the limited scope of social media influencers based solely on Ned Hallowell's case analysis. Future research can analyse and compare more professionals in the field of ADHD.

REFERENCES

- Akgün, N. R., & Girgin, D. (2020). Teacher candidates achievements from The ADHD vocational elective course. *International Journal of Psychology and Educational Studies*, 7(3), 126–142. https://doi.org/10.17220/ijpes.2020.03.012
- Boot, N., Nevicka, B., & Baas, M. (2020). Creativity in ADHD: goal-directed motivation and domain specificity. *Journal of Attention Disorders*, 24(13), 1857–1866.
- Carpenter, C. R., & Sherbino, J. (2010). How does an "opinion leader" influence my practice? *CJEM*, 12(5), 431–434. https://doi.org/10.1017/s1481803500012586
- Clouder, L., Karakus, M., Cinotti, A., Ferreyra, M. V., Fierros, G. A., & Rojo, P. (2020). Neurodiversity in higher education: a narrative synthesis. *Higher Education*, 80(4), 757–778. https://doi.org/10.1007/s10734-020-00513-6
- Cooley, D. O., & Parks-Yancy, R. (2019). The effect of social media on perceived information credibility and decision making. *Journal of Internet Commerce*, *18*, 249–269.
- Crane, M. E., Atkins, M. S., Becker, S. J., Purtle, J., Olino, T. M., & Kendall, P. C. (2021). The effect of caregiver key opinion leaders on increasing caregiver demand for evidence-based practices to treat youth anxiety: protocol for a randomized control trial. *Implementation Science Communications*, 2(1), 107. https://doi.org/10.1186/s43058-021-00213-x
- Cunningham, W. A., & Derks, P. (2005). Humor appreciation and latency of comprehension. *Humor*, 18(4), 389–403.
- Degnan, A., Berry, K., Humphrey, C., & Bucci, S. (2021). The relationship between stigma and subjective quality of life in psychosis: A systematic review and meta-analysis. *Clinical Psychology Review*, 85, 102003. https://doi.org/10.1016/j.cpr.2021.102003
- Flodgren, G., O'Brien, M. A., Parmelli, E., & Grimshaw, J. M. (2019). Local opinion leaders: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev*, 6, CD000125. https://doi.org/10.1002/14651858.CD000125.pub5
- Gell, S., Engel, E., Heiss, R., & Karsay, K. (2023). Challenges and benefits of social media influencers for adolescent health – a scoping review. *European Journal of Public Health*, 33(Supplement_2). https://doi.org/10.1093/eurpub/ckad160.296
- German, Z. J. (2021). *The moderating role of coping strategies on quality of life in adults with ADHD symptomatology* [Doctoral dissertation, Alliant International University]. ACM Digital Library. https://dl.acm.org/doi/10.5555/AAI27999954.

- Girard-Joyal, O., & Gauthier, B. (2022). Creativity in the predominantly inattentive and combined presentations of ADHD in adults. *Journal of Attention Disorders*, 26(9), 1187–1198.
- Hatak, I., Chang, M., Harms, R., & Wiklund, J. (2021). ADHD symptoms, entrepreneurial passion, and entrepreneurial performance. *Small Business Economics*, 57 (4), 1693–1713. https://doi.org/10.1007/s11187-020-00397-x
- Hayashibara, E., Savickaite, S., & Simmons, D. (2023). Creativity and neurodiversity: towards an inclusive creativity measure for autism and ADHD. https://doi.org/10.31219/osf. io/4vqh5
- Jan, M. (2020). Autism: A function of neurodiversity? Journal of Human Services: Training, Research, and Practice, 5(1). https://doi.org/https://scholarworks.sfasu.edu/jhstrp/vol5/ iss1/5
- Kane, J., & McGregor, M. (2022, March 28). Unlocking a new era of key opinion leader engagement: the power of digital voices. *PharmExec*. https://www.pharmexec.com/view/ unlocking-a-new-era-of-key-opinion-leader-engagement-the-power-of-digital-voices
- Kang, S., Ha, J. S., & Velasco, T. (2017). Attention deficit hyperactivity disorder on YouTube: Framing, anchoring, and objectification in social media. *Community Ment Health J*, 53(4), 445–451. https://doi.org/10.1007/s10597-016-0015-5
- Kessler, Z. (2023, March 30). *Book review: Because i come from a crazy family: the making of a psychiatrist*. ADDitude Inside the ADHD mind. Retrieved March 31 from https://www.additudemag.com/adhd-memoir-ned-hallowell/
- Kirby, A. (2021, February 24). Nurturing our Neurodiverse creative thinkers of the future. *LinkedIn*. https://www.linkedin.com/pulse/nurturing-our-neurodiverse-creative-thinkers-future-prof-amanda-kirby/
- Lauder, K., McDowall, A., & Tenenbaum, H. R. (2022). A systematic review of interventions to support adults with ADHD at work—Implications from the paucity of context-specific research for theory and practice. *Frontiers in Psychology*, *13*, 893469.
- Lichtman, M. (2023). *Qualitative research in education: A user's guide*. Routledge.
- Lindgren, B.-M., Lundman, B., & Graneheim, U. H. (2020). Abstraction and interpretation during the qualitative content analysis process. *International Journal of Nursing Studies*, 108, 103632. https://doi.org/10.1016/j.ijnurstu.2020.103632
- Lindman, A. (2023). What is the ART of ADHD SoMe acting: And how is it artistically relevant for everyone to know? [Master's thesis, Stockholm University of the Arts, Stockholm, Sweden] https://urn.kb.se/resolve?urn=urn:nbn:se:uniarts:diva-1403
- Lou, C., & Yuan, S. (2019). Influencer marketing: how message value and credibility affect consumer trust of branded content on social media. *Journal of Interactive Advertising*, 19(1), 58-73. https://doi.org/10.1080/15252019.2018.1533501
- Lutz-Fritz, A. J., & Hast, M. (2023). ADHD students and school social education: a swiss case study on the importance of empowerment. *European Journal of Special Education Research*, *9*(3). https://doi.org/10.46827/ejse.v9i3.4919
- Marvasti, A. (2019). Qualitative content analysis: A novice's perspective. *Forum: Qualitative Social Research*, 20(3), 32. https://doi.org/10.17169/fqs-20.3.3387
- Nelson, A. (2019). Ups and Downs: social media advocacy of bipolar disorder on world mental health day. *Frontiers in Communication*, 4, 24. https://doi.org/10.3389/fcomm.2019.00024

- Nunkoo, R., Gursoy, D., & Dwivedi, Y. K. (2023). Effects of social media on residents' attitudes to tourism: Conceptual framework and research propositions. *Journal of Sustainable Tourism*, *31*(2), 350–366.
- Ogrodnik, M., Karsan, S., Malamis, B., Kwan, M., Fenesi, B., & Heisz, J. J. (2023). Exploring barriers and facilitators to physical activity in adults with ADHD: A qualitative investigation. *Journal of Developmental and Physical Disabilities*, 1–21.
- Peters, D. L. (2012). It really is all about the child: An interview with Dr. Edward Hallowell. *Montessori Life*, 24(4), 12–17.
- Rigg, B. M. (2022). Conquering learning disabilities at any age: How an ADHD/LD kid graduated from Yale and Cambridge, became a marine officer, military historian, financial advisor and caring father. Fidelis Historia.
- Rogers, E. M., Singhal, A., & Quinlan, M. M. (2019). Diffusion of innovations 1. In D. W. Stacks, M. B. Salwen, K. C. Eichhorn (eds). *An integrated approach to communication theory and research* (pp. 415–434). Routledge. https://doi.org/10.4324/9780203710753-35
- Ruijne, R., Zarchev, M., van Weeghel, J., Henrichs, J., Garofalo, C., Bogaerts, S., Mulder, C., & Kamperman, A. (2022). Experiencing discrimination mediates the relationship between victimization and social withdrawal in patients suffering from a severe mental illness: A cross-sectional study. *Journal of Psychiatric Research*, 148, 14–20.
- Samari, E., Teh, W. L., Roystonn, K., Devi, F., Cetty, L., Shahwan, S., & Subramaniam, M. (2022). Perceived mental illness stigma among family and friends of young people with depression and its role in help-seeking: a qualitative inquiry. *BMC Psychiatry*, 22(1), 1-13.
- Scher, J. U., & Schett, G. (2021). Key opinion leaders: A critical perspective. *Nat Rev Rheumatol*, *17*(2), 119–124. https://doi.org/10.1038/s41584-020-00539-1
- Sismondo, S. (2015). How to make opinion leaders and influence people. *Canadian Medical Association Journal*, 187 (10) 759–760. https://doi.org/10.1503/cmaj.150032
- Soler-Gutiérrez, A.M., Pérez-González, J.-C., & Mayas, J. (2023). Evidence of emotion dysregulation as a core symptom of adult ADHD: A systematic review. *PloS One*, *18*(1), e0280131.
- Song, P., Zha, M., Yang, Q., Zhang, Y., Li, X., & Rudan, I. (2021). The prevalence of adult attention-deficit hyperactivity disorder: A global systematic review and meta-analysis. *Journal of Global Health*, 11. 04009. https://doi.org/10.7189/jogh.11.04009
- Subramaniam, M., Abdin, E., Vaingankar, J. A., Shafie, S., Chua, H. C., Tan, W. M., Tan, K. B., Verma, S., Heng, D., & Chong, S. A. (2020). Minding the treatment gap: Results of the Singapore Mental Health Study. *Social Psychiatry and Psychiatric Epidemiology*, 55, 1415–1424.
- Triplett, N. T., Kingzette, A., Slivinski, L., & Niu, T. (2022). Ethics for mental health influencers: MFTs as public social media personalities. *Contemporary Family Therapy*, 44(2), 125–135. https://doi.org/10.1007/s10591-021-09632-3
- Watters, C., Adamis, D., McNicholas, F., & Gavin, B. (2018). The impact of attention deficit hyperactivity disorder (ADHD) in adulthood: a qualitative study. *Ir J Psychol Med*, *35*(3), 173–179. https://doi.org/10.1017/ipm.2017.21
- White, H. A., & Shah, P. (2011). Creative style and achievement in adults with attention-deficit/ hyperactivity disorder. *Personality and Individual Differences*, 50(5), 673–677.
- Wiginton, K. (2021, 16th May). *What Is Neurodiversity?* WebMD. https://www.webmd.com/ add-adhd/features/what-is-neurodiversity

- Yao, W., Zeng, Q., & Zeng, Y. (2022). *Would you pay for image? E-commerce clothing purchase research of female undergraduates in China*. 2022 6th International Seminar on Education, Management and Social Sciences (ISEMSS 2022)
- Zsila, Á., & Reyes, M. E. S. (2023). Pros & cons: impacts of social media on mental health. *BMC psychology*, 11(1), 201. doi.org/10.1186/s40359-023-01243-x