# Experiences of employed women with attention deficit hyperactive disorder: A phenomenological study

N. Schreuer[a],* and R. Dorot[b]
[a]*Department of Occupational Therapy, Faculty of Welfare and Health Studies, University of Haifa, Mount Carmel, Haifa, Israel*
[b]*The "Naim Kadima" (Moving Forward) Project – Unlimited Mobility in the Community*

**Abstract**.

**BACKGROUND:** Employees with attention-deficit/hyperactivity disorder (ADHD) face various risks in the workplace. Little is known of the specific challenges women with ADHD experience.

**OBJECTIVE:** To explore the experiences of working women with ADHD and learn the strategies and accommodations that facilitate their maintaining employment.

**METHOD:** Qualitative phenomenological approach was used to echo women's subjective perceptions and experiences representing their daily interactions in their workplace. In-depth interviews were conducted with eleven tertiary-educated employed women (M = 33.5; SD = 6.61 years), diagnosed with ADHD and the transcripts were analyzed by three researchers, using the qualitative phenomenological approach.

**RESULTS:** Most interviewed women with ADHD described interactions with their workplace as confusing, overwhelming, and chaotic. They perceived their ADHD as a significant obstacle to success in employment that also conferred some advantages. Three interview themes are explored here (1) challenges in coping with job demands and the workplace, including the disclosure dilemma; (2) personal coping strategies; (3) useful accommodations.

**CONCLUSIONS:** For the women interviewed, employment was important for their self-identity, beyond simply making a living. Their experiences indicate impaired executive functioning and inhibition and sensory sensitivity, consistently with theoretical models for ADHD. They identified gender-specific issues, such as using medication during pregnancy, which led them to seek for non-pharmacological coping mechanisms. They contributed practical knowledge regarding employee-led adaptations and employer-provided workplace accommodations.

Keywords: Gender, accommodations, qualitative method, attention deficit/hyperactivity disorder

## 1. Introduction

Employees with attention-deficit/hyperactivity disorder (ADHD) face various risks and challenges in the workplace. They have difficulties entering the labor market and exhibit a high rate of job switching [1, 2]. They report working overtime in an attempt to deal with their challenges and increase their productivity, and experience behavioral issues, such as irritability and low frustration tolerance [3], chronic forgetfulness, lateness, disorganization, and impulsivity that lead to conflicts with their superiors [4]. As a result, adults with ADHD are less likely to be promoted and typically earn less than other workers [5]. Compared to non-ADHD, employees with

*Address for correspondence: Naomi Schreuer, Department of Occupational Therapy, Faculty of Welfare and Health Studies, University of Haifa, Mount Carmel, Haifa 31905, Israel. Tel.: +972 4 828 8738; Fax: +972 4 8249753; E-mail: schreuer@research.haifa.ac.il.

ADHD are also prone to higher rates of work-related accidents, trauma, and health-related work impairment and decreased work productivity [3, 6, 7] and are three times more likely to have their employment terminated [8, 9]. The impact of ADHD on function at work was found correlated with inattention and organizational deficits, while being mediated partially by emotional symptoms [10] These phenomena take a personal toll, and have economic and social implications in the immediate and long term [5, 11].

Most of the literature explores the difficulties of employees with ADHD in comparison with employees without ADHD and the consequences of ADHD for individuals, the labor market, and society [4, 10, 11]. For adults with ADHD, the medical literature recommends stimulant medications alone or combined with psycho-education as the first-line treatment [3]. Other practical recommendations for improving the performance of employees with ADHD are based mostly on self-help and clinical experience rather than on evidence-based data [13]. Recently, clear weaknesses were recognized in the current arrangements adopted internationally to address the occupational difficulties faced by adults with ADHD, leading to a call for research initiatives and for the development of research tools and interventions to address those difficulties [14].

There is a debate in recent literature about gender differences and similarities with respect to ADHD symptoms and their consequences [15]. Some claim that in women, ADHD is often a "hidden disorder" that is underdiagnosed [8, 16–18]. Little is known of the specific characteristics of women with ADHD that might cause challenges while coping with work, among many other life roles [19]. A 2012 study found wide ranging adverse effects for women with respect to their home life, social life, education, money management, and daily life activities [20].

Overall, there is insufficient focus on the individual experience and on addressing gender as a factor affecting work performance [13]. Most studies report on absenteeism and unemployment, together with emotional and social problems [21]. Little is known about the effects of having ADHD on employed women and their interactions with the physical and human work environment and the work family balance [22–24].

Therefore our two major research questions are: what are the significant challenges women with ADHD experience in their work? What are the accommodations and facilitators that help them to maintain their jobs?

## 1.1. Theoretical framework

According to the current Diagnostic and Statistical Manual of Mental Disorders (DSM 5) [25], ADHD is a neuro-developmental disorder. The characteristics of ADHD are reoccurring patterns of attention deficit and/or hyperactivity and impulsivity that started prior to the age of seven and are more severe than the developmentally-appropriate norm. ADHD manifests as one of three subtypes: a) combination of hyperactivity-impulsivity and inattention; b) predominantly inattentive; or c) predominantly hyperactive-impulsive.

Existing theories of ADHD suggest that it is caused by dysfunctions in cognitive, neuropsychological, or motivational processes [26]. Two models that have catalyzed considerable research are those of Barkley and Brown. Barkley's Model of Behavioral Inhibition [8, 27] suggests that ADHD is a deficit in executive functioning (*i.e.*, in the ability to organize behavior across time to attain future goals). Poor functioning in the inhibition domain of executive functioning affects motor, verbal, cognitive, and emotional activities. This, in turn, adversely affects the metacognitive domain's activities of working memory, planning and problem-solving, and emotional self-regulation [28]. Barkley emphasizes that a primary implication of his model is the need to compensate for executive functioning deficits through environmental modifications and accommodations. Brown's ADHD Model [29, 30] proposes "attention" as a name for the integrative activity of the brain's executive functions. Brown's ADHD Model emphasizes that the performance of people with ADHD is situational, depending on contextual and occupational demands [29]. Both models encourage employers to enhance understanding of the phenomena and to provide suitable accommodations in order to benefit from qualified and creative employees.

In addition to these cognitive psychological models, there is Dunn's Sensory Processing Model [31], from the field of occupational therapy. Dunn's model focusses on understanding the sensitive interaction employees with ADHD have with their environment. Building on Aryes' [32] claim that functioning in any context relies in large part on people's abilities to process, organize, and integrate sensory information, Dunn [31] posits that people demonstrate four sensory processing patterns: sensory seeking, sensory avoiding, sensory sensitivity, and low registration. The Sensory Processing Model considers that people with ADHD (and other disorders) are

found at the extremes (*i.e.,* in the highest or lowest percentiles) with respect to these sensory processing patterns and could therefore benefit from appropriate interventions to improve sensory integration and function [31].

### 1.2. Employees with ADHD

According to the occupational therapy Model of Human Competence at work [33], competence depends on achieving a good fit between the person and his or her environment in (a) the personal dimension; (b) the employment dimension; and (c) the environmental dimension.

At the *personal* level, studies have found that executive functioning deficiencies impede self-control, timing, persistence, flexibility, the ability to deal with complex situations, time management, and prioritization [4, 26, 28, 34]. Problems with self-regulation make it difficult for many employees with ADHD to work independently and complete complex and multi-level tasks [22, 34]. ADHD is associated with lower performance, particularly in-role performance, which suggests that employees with ADHD may divert their attention away from task-relevant behaviors [35].

In the *employment* dimension, studies show that an occupational match between a person and his or her job is a key to success [36]. There is disagreement as to whether there exist certain occupations more suited to the profile of people with ADHD, which may be regarded as ADHD-"friendly" occupations [4, 37]. Environments rich in stimuli, such as noise and bright lights and colors, may distract employees with ADHD [37]. Nevertheless, employees with ADHD were found to be highly valuable in positions and environments that had been adjusted to take their needs and their strengths into account, especially in jobs that require creativity and a very fast work pace [37]. Barkley suggested that people with ADHD may perform better in roles that are more social and manual by nature [1]. There is evidence that employees with ADHD are not evenly distributed throughout the workforce. Thus, a large survey by the World Health Organization [12] found that ADHD is less common among professionals as compared with white-collar technical, service, and blue-collar workers. Furthermore, adults with ADHD experience reduced employment and a significant reduction in earnings compared with adults without ADHD that can be explained only partially by their educational attainments and co-morbidities [38]. In the current

study we purposefully chose employed women, who had educational opportunities, including acquiring professional tools that proved their success despite the challenges, in order to learn from their experience.

With respect to the *environmental* dimension, social and attitudinal barriers in the workplace, particularly stigmas, can adversely affect the acceptance and retention of employees with disabilities [37, 39]. Since ADHD is a hidden disability, people often attribute the poor performance of employees with ADHD to low employee motivation, intentional behavior, or a weaker nature [40]. Teachers, physicians and controls were found to hold stigmatizing attitudes toward adults with ADHD across seven dimensions: *Reliability and Social Functioning*, *Malingering and Misuse of Medication*, *Ability to Take Responsibility*, *Norm-violating and Externalizing Behavior*, *Consequences of Diagnostic Disclosure* and *Etiology* [41]. It is therefore not surprising that most employees with ADHD are reluctant to disclose their difficulties and ask for support or accommodations [4].

Obtaining the workplace accommodations necessary to actualize their rights as people with disabilities remains a significant challenge for adults with ADHD, even in the United States, where most research into ADHD in adults has taken place [14], and presumably in other countries also [7, 20]. Existing accommodations include: (1) providing environmental accommodations and equipment, such as a quieter work space, headphones, alarms; (2) modifing workplace policy and job structure, such as flexible scheduling, allowing productive movements, encouraging activity, providing structured breaks in long meetings; structured notes, agendas and delegating tedious tasks; (3) providing modified support, such as regular supervision with frequent feedback and mentoring, instituting incentive/reward systems, regularly introducing change, breaking down targets and goals, and supplementing verbal information with written material [14, 30]. The generic nature of these accommodations raises a question as to whether they can accommodate any gender-specific needs of women.

Given that little is known about the effects of having ADHD on employed women in the work environment [24], and about the recommended accommodations that address their needs, there is a need for further research. Hence, the purposes of the present study were (1) to understand the meaning of employment for women with ADHD with tertiary education in light of the challenges they face while

coping with job demands and the workplace; and (2) to learn from women with ADHD which personal strategies and environmental accommodations enable them to maintain their employment. As very little is known about either aspect, we adopted for the current exploratory study a qualitative methodology using a constructive approach, as this is considered the most suitable means for obtaining a comprehensive picture under such circumstances [42, 43].

## 2. Method

### 2.1. The phenomenological approach

The current study was conducted using a qualitative study design based on the thematic analysis of interviews with tertiary educated working women who have ADHD. The qualitative phenomenological approach was chosen because it aims to illuminate specific phenomena through how they are perceived by the actors in a situation and iterations within a complex context and long processes [43]. The phenomenological approach is based in an inductive paradigm of personal knowledge. As such it is powerful for deep understanding of subjective experience, gaining insights into people's motivations and actions, through discussions, participatory observations, and in the current study – in depth interviews representing the perspective of working women with ADHD and their interactions with their physical and human working place.

### 2.2. Participants

Using a purposeful sampling method, participants were selected according to the following inclusion criteria: documented diagnosis of ADHD from a neurologist or psychiatrist; age of 25–45 years; and without any other self-reported disability or health issues to prevent confounding from comorbidities. In order to learn from successful experiences, employed women with a variety of professional post-secondary educational background were included (e.g. teacher, social and health services workers, graphic designer, chemical technician, and executive secretaries). Women were recruited in response to numerous advertisements and calls for participation that were disseminated on professional websites and forums, via e-mail, and through Facebook.

Eleven women participated in the study. They had a mean age of 33.5 (SD = 6.61) years and a mean education of 15.8 (SD = 3.09) years. All but one, were born in Israel, which is also where the research took place. Six of the participants were single, five were married, with four having children. Eight of the women were salaried, two of the women were self-employed and one combined both self- and salaried employment. Their experience at their current job was 3.45 (SD = 3.08) years; four were in full time employment (40 hours per-week), four worked 30 hours per-week, two worked 20 hours per-week, and one worked less than 20 hours per week. The participants reported having been employed in 1–10 work places, with an average of 4.5 work places. Seven participants used medication to control their ADHD symptoms – two took medication on a regular basis and five used medication occasionally.

### 2.3. Data collection

Data were collected by means of semi-structured interviews conducted in accordance with an interview guide established by three researchers, following the methodology of Bryman [44], and refined following the first three interviews. Following approval by the Institutional Review Board of the University of Haifa, the eleven candidates who met the inclusion criteria were introduced to the aims of the research, its scope, and method, and asked to give their signed consent to participate. Participants could choose the time and place for an approximately two hour meeting. After completing a short demographic questionnaire, in-depth interviews were conducted by an occupational therapist who specializes in vocational rehabilitation and who also took reflective field notes. Those notes supported the researchers' awareness and transparency during their interpretations. The interviews were audio recorded, transcribed verbatim, and encoded confidentially with all identifiers removed. The interview stage ended upon reaching saturation of content, meaning that interviews were analyzed simultaneously by three researchers and when they found no new ideas or new categories of content emerging from the tenth and eleventh in depth interviews – we stopped the interviews and as suggested in the literature, we wrote the final report [44, 42].

### 2.4. Analysis

The eleven in-depth interviews were analyzed using the content analysis method by coding the data, categorizing the data into groups, and identifying commonalities and differences among the

interviewees' experiences, with the aim of identifying the major themes [42]. Identification of the themes and reconstruction of the categories were undertaken in a critical process conducted among three expert researchers, who independently revisited the raw data and reexamined the findings and the validity of each theme against citations from the interviews [44]. Triangulation of the data was conducted within and between the interviews and the reflective field notes. In other words, in order to increase the neutrality and reliability of the interpretations and achieve a deeper understanding, the researchers examined and presented quotations of each woman at different moments along the interview, and among various participants, representing the major topics as well as similarities and oppositions. Additionally, they were validated by the researchers' reflective notes written immediately after the interviews, including non-verbal communication and other relevant comments [44]. Following the data analysis, the early draft of the findings report was shown to two interviewees, in order to get feedback and to validate the main themes emerged.

## 3. Results

Analysis of the interviews revealed four main themes concerning the meaning and experience of employment for women with ADHD) 1) a feeling of being different because of an invisible disability; (2) challenges in coping with job demands and the workplace; (3) personal strategies and environmental accommodations; and (4) the experience and significance of employment. This paper focuses solely on the three latter themes. The first theme is not work-related, relates mostly to past experiences in the education system, including challenges that led them to diagnosis, and is being published elsewhere [45].

The three major themes emerged from the eleven in-depth interviews are presented herby, integrated with quotes as evidence of the themes and of our interpretations. All names have been changed to preserve anonymity. All quotes are brought in translation while endeavoring to retain the flavor of their spoken language. Pauses in speech are indicated by three dots.

### 3.1. Challenges in coping with job demands and the workplace

Three women considered having ADHD as just one of the barriers that they must overcome to adjust to

their job, rather than coping with some kind of disability. They referred to this barrier as a difficulty in reading the social map, meaning that they did not comprehend the unspoken hierarchy, rules, and expectations of the workplace. They did not know to whom to turn for specific matters and what was improper to say, and this caused much embarrassment. All the interviewees also described imbalances or difficulties in regulating their interactions in the workplace, as Sigal stated: "It is all about some kind of imbalance, isn't it? ..." The participants mentioned experiencing three types of imbalance between their internal state and environmental stimuli (a) difficulties in filtering and regulating their reactions to stimuli; (b) difficulties in regulating their emotional and behavioral reactions; and (c) difficulties with emotional and behavioral regulation upon moving between structured situations they needed in order to function best and flexible boundaries they demanded.

### 3.1.1. Challenges in filtering and regulating their reactions to stimuli

This issue was mentioned by ten interviewees, especially with respect to coping with strong auditory and visual stimuli, as Yaara described: "One of the characteristics, for me at least, of ADHD is that it is very hard for me to ignore stimuli...and one of them is this noise, and if there is something very bright, very, very tempting, it is very hard for me". The women reported that such stimuli may overwhelm and/or attract and distract them in a manner that impedes their focus on required tasks. Such oversensitivity to stimuli, such as the presence of others in the room or discussions in the corridors, sometimes led to conflicts with supervisors and peers.

"If I had to work with someone else in the room I could not work ...in particular my room was located in front of the office and the secretaries would talk with the speaker ...it was very hard for me... today if a bird is sitting on the window and peeps I cannot ...I can hear everything ..." (Nurit). Some participants expressed the positive view that their oversensitivity led them to become aware of their special needs and of their need for accommodations aimed at reducing their exposure to overstimulation.

At the other extreme, some of the women interviewed needed a certain level of stimulation to function at all:

"I remember that Thursday was meetings day . . . I felt . . . at the end of the day as if a truck had run over me . . . I think I get bored easily. If there are not enough strong stimuli, I settle into a kind of nap mode . . . . I was told once by a university lecturer that I need picks, huge picks, in order to get things out of myself . . . " (Nurit).

Other interviewees, faced with the lack of such stimulation, sought it for themselves. In the workplace, the search for stimulation manifested in restlessness during long meetings, frequent movement and breaks, as well as in seeking a change of activity, which sometimes contradicted the demands of the job. The experience of not having enough appropriate stimuli in their job and complaints of being bored and frustrated brought some of the women to look for stimuli in leisure activities, and caused five of them to quit and switch jobs several times, as Alona described:

"The experience was primarily frustrating . . . in most places, even places that were nice overall, the sense was that I got bored very quickly . . . Terribly quickly, like I lose interest in the actual work and I do it because I must . . . I get up in the morning because I have to and because I have to make a living . . . ."

Later in Alona's interview, she elaborated on the tension between her seeking stimulation and interesting jobs that require multi-tasking, versus the actual jobs she succeeded in retaining and her huge frustration as a result.

### 3.1.2. Challenges in regulating emotions and behavior

This challenge was mentioned by most (8) interviewees, who emphasized that ADHD is an emotional experience. "I think my ADHD is very emotional, it's much less functional uh . . . like, I think that much [of the] overload is emotional . . . " (Sigal). Furthermore, they described intense overreaction emotional outbursts that were more intense than those of others, which occurred in inappropriate situations or at inappropriate times. Some of these emotional reactions were connected specifically to frustrating experiences, as Neta said: "Spatial orientation in a new place is something very frustrating and I can cry about it almost every day . . . " Other emotional reactions indicated a fragile identity and low self-esteem, as Tamar described a case where she got negative feedback from her supervisor, who

was not open to accommodating her with extra training:

"I crashed there. And she comes and tells me 'Tamar, perhaps you can succeed somewhere else . . . that does not mean . . . we do not have the time to teach you'. . . and from my side, I told her, 'M., I'm a failure, I'm simply a failure' . . . and I like really cried . . . " (Tamar).

In addition to the overreaction emotional responses, three of the participants exhibited impulsive reactions. For example, Dafna described suddenly quitting her job without prior notification, selling up and moving overseas with immediate return home, starting over and then repeat the cycle few times. Five of the interviewees reported impulsive speech. Tamar related interrupting others' conversations, which created friction in the workplace, accompanied by hard feelings and self-blame:

"They get to know me that I'm very impulsive, I want right here and now . . . sometimes I burst a little into conversations of . . . what burst?, I do not barge into other's conversations, but I have no patience . . . "(Tamar).

### 3.1.3. Challenges in regulating time and boundaries

Such challenges were mentioned by nine interviewees, who talked about activities frequently taking them much longer than others require, about being late, and having a different perception of the dimension of 'time', as Vered described: "Today I know that the scope of time for people with ADHD . . . we have like a different watch . . . ". This different 'watch' meant that the teacher, Lilach, accomplished few things during school breaks, and was always late for the next lesson, despite her best efforts. Sigal expressed her frustration with needing "quadruple the time" to learn things compared with those around her.

Most interviewees expressed ambivalence regarding their need for routines and for stable and structured boundaries in activities and their environment, versus their desire for flexibility and accommodations to let them do things in their own way. Sigal expressed her need for a structured routine to preserve peace of mind. Others mentioned that structure prevented confusion and overwhelming stimulation, prevented a sense of having no control, ameliorated adjustment challenges,

and better enabled emotional and behavioral regulation.

Nevertheless, more than half of the interviewees also described difficulty in coping with the imposition of discipline and boundaries which we consider may enhance feelings of insecurity and impair creativity. Some recognized a dual and contradictory wish for autonomy coupled with a need for structured guidance that confused peers and supervisors. Nurit added an additional underlying reason: " . . . because I prefer to do things my way, which is sometimes a bit different from what people are used to seeing, and then ask for help when I need it".

Boundaries that were presented as *fait accompli* provoked resentment, hurt, and anger, in contrast to boundaries presented through respectful dialogue. The interviewees' ambivalent attitude toward boundaries caused two major problems—frequent conflicts with authority and vague home–work boundaries. Conflicts with supervisors that arose from difficulties in regulating time and boundaries were sometimes significant, including being fired, passed over for promotion, frequently switching jobs, or having to stay in an unsatisfying position. As Alona expressed: "I do not think it's appropriate for me to be a secretary . . . It does not suit who I am. There is a gap between my mental ability and what I'm doing now. So it is very frustrating; very, very frustrating . . . ". The vagueness of the home–work boundary was also a source of conflict:

> "There is also significance to what's called the work–family conflict. I don't know . . . it might be related to the disorder—that it's more difficult to separate family from it . . . And this impulsivity, like you want every problem solved, like you try [to solve work problems] at home too, as if you're going to set the whole world in motion to solve it, you cannot wait until tomorrow. I think that triggers this conflict . . . " (Neta).

Sigal also described blurry home–work boundaries, but she attributed it to her over-involvement in work, which was a most important role and occupation for her:

> "It's not the case that work affects daily life, and it's not that daily life affects work . . . it's all so together . . . I think it [work] generally keeps my head above water, yet it's also often very ah heavy." (Sigal)

## 3.2. Personal coping strategies and environmental accommodations

The strategies developed by the interviewees fell into two groups: strategies related to the person (what did the interviewee do to adapt herself to the work environment?); and those related to the environment (what accommodations did the interviewee seek or desire from her environment?).

### 3.2.1. Personal coping strategies

In line with its status as the first-line treatment for ADHD [46], most of the women were offered medication to ameliorate their difficulties at work. The use of medication to control ADHD was raised by most of the interviewees (seven), who largely expressed ambivalence toward taking medication. Lilach described its positive effect: "You are more understandable, you're calmer, also from the body's perspective. You are very focused on your task and also when you speak . . . ". Five of the interviewees reported that the medication made them more focused and some mentioned that it had a generally calming effect. However, it also had side-effects and decreased their creativity, as Sigal described:

> "It's a terrible zombie . . . it turned me into like a sort of robot and I wouldn't see to my left and I wouldn't see to my right . . . it focuses, but it kills too, as if there's no feeling, there's no emotion as if everything . . . like a kind of mask that makes everything blurry . . . ".

In a similar vein, Alona mentioned that "the medicines also suppress abilities". Neta referred to a limitation that is unique to women who are reluctant to take any medication during pregnancy and breastfeeding. Interrupting treatment may adversely affect performance in the workplace to the extent of undermining employment stability.

The second most frequent type of personal strategy (mentioned by six interviewees) was seeking a suitable job, which required that the women first develop greater self-awareness of their needs. Nurit mentioned the need for women with ADHD to become aware of their strengths and weaknesses and factor these into their choice of both the employment field and the specific job, rather than "beating your head against a wall" for something that is intrinsically unsuitable. Many interviewees expressed the view that finding an interesting occupation raises employee motivation to cope with challenges. Similarly, the women thought that finding an ADHD-friendly

occupation in an area that matched their needs could prevent, or at least diminish, difficulties from the outset and may obviate the need for daily medication.

Five others found that choosing a job with flexible hours or working shifts suited working with ADHD. Others considered it important to have a job that demanded shifting between various tasks and multi-tasking. As Yaara said; "this is the reason that I think I survived so long in my current job . . . because I'm always doing several things; holding a phone while reading something . . . and I don't get bored". At the other end of the spectrum, Sigal described how the emotional chaos and confusion of ADHD propelled her into working and helping others as a Yoga teacher. In doing so, she achieved things that she and those around her never believed possible, such as meditation and a 14-day silent Vipasana retreat during which she experienced no symptoms of ADHD.

Another solution, suggested by five interviewees, was self-employment, which the interviewees saw as offering freedom of action and control over work hours. Alongside these advantages, two participants described difficulties with this solution, particularly with respect to the administrative and book-keeping aspects.

The third most frequent type of personal strategy was to change work habits by increasing the frequency of breaks. Four of the interviewees took breaks to move their body or to relax from the cognitive effort, as Rakefet explained: "once an hour I have to get up—whether it's to drink or go to the toilet, I have to stand, to move the body". However, some participants acknowledged that this coping mechanism was problematic to their supervisors, to the work sequence, and to accomplishing the task in a timely manner.

The interviewees also used several strategies to address difficulties in time management. These strategies aimed to directly address their attention deficits, poor short-term memory, tendency to be overwhelmed by stimuli, and organizational difficulties. The most frequently used strategy was working extra time beyond the defined hours (and often at home) to allow the women to accomplish their professional obligations. To improve their success in managing time and tasks and to avoid the sense of a chaotic day, all interviewees spoke about making to-do lists, prioritizing, preparing the environment and equipment beforehand, and utilizing technological aids, such as scheduling applications, alarm reminders, and audio recordings:

"First of all I have to put reminders for myself in Outlook soon enough so as not to get to the last moment and deal with it under pressure, which creates a black out . . . if I send a reminder soon enough, I have sufficient time to do it at my own pace, quietly and to meet the dead line . . . " (Nurit).

"A lot of independent work at home. To list . . . to list exactly as for preparing a cake . . . everything works according to protocol, everything has to be exact like this—what you should do first and what next . . . " (Hadar).

". . . it allows you to manage the tasks and to prioritize according to the time you finish and not according to the time you start" (Yaara).

Hadar found that recording meetings was not only a practical and effective tool, but also one that, in enabling her to complete her tasks at home "with my piece of mind", prevented the embarrassment and stress associated with needing to ask people to repeat and explain themselves, as she had done before.

Three interviewees used inner talking to focus their attention: "in order to avoid doing multi-tasking assignments simultaneously . . . ah . . . it really helped me, the focus . . . that is, to remember all the time to talk to myself and to say what I am focusing on, ah . . . everyday" (Lilach). Some women also used inner talking to control their feelings and behaviors:

"We need to learn how to control ourselves, to control what we blurt out, like [makes a galloping sound] . . . stop the horses, don't talk . . . it's a lot of self-work". (Tamar)

"For a long period of time, I wrote . . . a lot . . . how I feel—[so as] not to pour my load on the first person who enters the room" (Vered).

### 3.2.2. Environmental coping strategies

Five of the interviewees found ways to adapt the physical environment at work through acoustic isolation in order to reduce stimulation and enhance their attention and organization. Acoustic isolation was achieved through a variety of means, including locating the workstation in a quiet environment at work, using noise-cancelling ear-phones at work, or working in a suitable environment at home. Yaara brought earphones in to work to listen to music that "catch[es] your senses" and that therefore served as an aural screen that, by reducing stimulation, reduced her need to move about frequently.

Ten interviewees referred to the human environment as enabling or hindering work. They talked about a few circles of support and accommodations, from the macro level to the micro level. The first circle, referred to by seven women, was organizational culture, which should be pleasant, welcoming, and appreciative. Three of the women mentioned that employees with ADHD should be able to expect their employer to be aware of their needs and strengths. Others spoke about the employer enhancing their performance by raising their motivation, defining the goals, giving clear directions, and gently confirming that these were correctly understood. Finally, interviewees noted that employers were sometimes disabling through a lack of awareness; that, in demanding that employees with ADHD adhere to workplace norms (such as working in front of a computer for nine hours a day), they stifled the creativity for which they her in the first place.

The second circle of accommodations that the interviewees referred to was support from colleagues. Three women described the presence of an official or unofficial mentor in the workplace who made their inclusion possible by providing crucial guidance about all aspects of the job and who served as their first address in the case of problems, as Neta described her 'lifesaver':

"To give the space that, like, it takes time for people to adapt. To guide more ... about where everything is and where you take everything ... if you need, for example, to fill out some forms, to offer help. The issue of structuring roles ... And to nominate a contact that you can approach in case of a problem that wasn't defined at first ... it can help, it can be a lifesaver".

Two interviewees looked for external assistance for specific tasks they had difficulty performing. This assistance was either provided by the workplace or obtained at the employee's expense and sometimes without the employer's knowledge. Areas in which external support proved essential were filing, performing technical calculations, and learning skills to organize the tasks and workplace.

One interviewee suggested the formation of support groups (possibly through Internet forums) for adults with ADHD. She could not comment on their effectiveness because, to the best of her knowledge, no such forums were available in Hebrew. However, she suggested that such an approach should enable people such as herself to learn new strategies and to strengthen their persistence and ability to cope. She considered that an on-line support forum would be preferable to a face-to face support group, which would likely turn into one more activity to organize into a hard-to-manage schedule.

### 3.3. The significance of employment for women with ADHD

Nine of the women interviewed related to people with ADHD as having advantages as creative employees who think out of the box and improvise creative ideas and solutions to problems. For some of the interviewees (four), their identity as a successful employee was a significant corrective experience, although not an easy one. Four mentioned their high energy compared to others, when they are involved and motivated in a project. Three of the interviewees talked about their ability to see and relate to many details simultaneously as an asset. Nurit brought a creative point of view of her advantage. She claimed that while "regular people" became stressed at work in the face of uncertainty and chaos, people with ADHD lived lives of constant chaos and were therefore more confident and/or better able to cope with such situations: "I don't know when the next problem will pop up, and I am sure it will come up ... it is clear that I will miss something or I will face the next challenge ... but eventually it is always something I can handle ..." (Nurit)

Throughout the interviews, the women also identified normative meanings of work as a livelihood, adding interest to life, providing opportunities for self-development and a place for support and social interactions.

## 4. Discussion

This study sought to understand the meaning of employment for women with ADHD and to learn from their self-perceptions which personal strategies and environmental accommodations enabled them to maintain employment, despite the barriers they experienced. The study builds on literature that identified functional employment problems among adults with ADHD and that called for more informed understanding of the possible barriers to employment, in order to initiate policies and develop best practices in collaboration with employers [14]. The study focused on women in light of research identifying gender differences in symptoms and in daily function [15, 16, 19],

in order to address the specific needs and particular barriers facing women.

We interviewed eleven currently-employed tertiary-educated women, diagnosed with ADHD, who were willing to share their experiences in detail. We analyzed in-depth interviews that we undertook with these women; looked for the meanings that their particular experiences held for them; categorized those meanings into themes; and presented the themes while citing quotations from the participants.

Three work-related themes emerged from the in depth interviews, namely: challenges in coping with job demands and the workplace; personal strategies and environmental accommodations; and the experience and significance of employment.

These three themes (discussed below) represent the theoretical contribution of the current study toward understanding employees with ADHD. Here, we interpret them within known cognitive psychological models [27–30] and occupational therapy models [31, 33]. These theoretical frameworks, supported by women's citations and examples, may improve our understanding of ADHD as it affects women in the workplace and may improve our competence to accommodate them.

### 4.1. The first theme – challenges and barriers

The interviewed women reported functional, affective, and self-esteem challenges that they attribute to their ADHD and that affected their interpersonal relationships with colleagues and supervisors at work. The women reported experiencing cycles of failure, frustration, self-blame, anxiety, low self-esteem, and unregulated emotional responses, consistently with the literature [17, 24]. For most of the women, ADHD had a strong and integral emotional component, in line with suggestions that mood instability is a core feature of ADHD [10, 47], rather than as an associated feature of the disorder [24, 48]. They experienced their lives as chaotic and imbalanced, and described many experiences that revealed gaps between their expected and actual work performance [24], related mostly to deficits in executive functioning and in regulating their response to internal and external stimuli and, consequently, their behaviors.

Dysregulation in the workplace expressed itself as impulsivity and difficulties with respect to filtering stimuli, modulating emotions and behaviors, and fluctuations in contradictory desires for structured and flexible boundaries. These findings support

a wide body of literature [e.g. 5, 49, 50] about ADHD as a deficit in self-regulation. Indeed, the women's experiences illustrate outward manifestations of all the subcategories of behavioral disinhibition mentioned in the Barkley [8, 27, 28] and Brown [29, 30] models.

Impaired executive functioning and behaviors together with difficulties with managing time and energy, learning from experience, and problem solving had dramatic negative consequences in the workplace for some of the women, including abrupt termination of their employment [10]. The women not only had difficulties on the attainment side of the expected-versus-actual performance equilibrium, but also noted problems caused by their difficulties in understanding social cues.

Our findings do not support the contention of Nussbaum [51] that women are more likely to show symptoms of attention deficit and less likely to exhibit hyperactivity and behavior disorders. Rather, the interviewees described considerable impairment across both domains, consistently with Fedele et al., [18]. The current research cannot draw conclusions as to whether their impairments were secondary to a late ADHD diagnosis, as was suggested by Nussbaum & Shepard [52]. However, we found that most of the participants were diagnosed with ADHD as adults, generally during a crisis in the face of the high demands associated with employment or transition from school into compulsory army service [45]. Consequently, they had no opportunity to acquire the skills or coping mechanisms that professionals endeavor to impart to children and adolescents [51].

### 4.2. The second theme – personal strategies and accommodations

This theme covers the wide range of personal strategies the women developed to accommodate their ADHD in the workplace. Most of the strategies they used or considered likely to be useful are consistent with the twenty types of accommodations listed by Barkley [1]. In addition, a few interviewees mentioned the importance of being extended trust and flexibility to deliver outcomes in their own way without overly close control, which they may perceive as disrespectful and stressful rather than helpful. Others increased their effectiveness as employees by bringing work home to complete. In contrast to Barkley [1] and the extensive literature, they did not perceive supportive employment as useful. A few of

them expressed a preference for using external paid assistance or on-line support, rather than explicit on-the job support.

The current research supports the frequently found association between ADHD and sensory processing dysfunction [31]. Importantly, this study provides a novel support that this association, noted from research on children, remains into adulthood and affects the functioning of employees with ADHD. The Dunn Model of Sensory Processing [31] posits that people with sensory processing deficits exhibit problems with at least one of four sensory processing patterns. The phenomena experienced by the participants (e.g. a compulsion to move, a need to avoid distracting noises, sensitivity to light and glare, and difficulty staying foccussed in meetings) exemplified all four patterns. Similarly, the accommodations they adopted (e.g., getting up to walk around, wearing noise-cancelling ear phones or positioning their desk in a quiet location, a preference for music without distracting words, and recording meetings) directly addressed their sensory dysfunctions in the workplace. The women's sensitivity to over- or under-stimulation, their needs and preferred accommodations are consistent with Dunn's Model of Sensory Processing [31].

### 4.3. The third theme – the significance of employment

Almost all the interviewees related to the importance of employment for their self-identity, beyond just making a living, as has been found for workers with other conditions [53]. For some of the women, mastering the demands of the job was an intensely corrective experience. Others referred to their special qualities, from which employers can benefit in a suitable, flexible, and supportive workplace [1]. Their expressions may raise the awareness and motivation to address their needs for accommodations, in order to reduce their unemployment rate.

In summary, this study sheds important light on the importance of employment for women with ADHD and identifies the personal strategies and environmental accommodations that they have found effective in enabling them to maintain that employment, and those they found less useful. The results of this study may also usefully inform research into the interactions of other populations with sensory regulatory deficits and/or social communication impairments with the workplace, such as adults with autism in mainstream employment [24].

## 5. Conclusions and limitations

The constructive phenomenological approach enabled women who experience the phenomenon of 'working with ADHD' to bring up new topics that researchers were not aware of and on which scarce information has being published. By using lengthy interviews to gather data, we uncovered information that would otherwise have remained hidden, including positive aspects of having ADHD; or dilemmas, such as participants' choice to forego psycho-pharmacological support, so placing their employment at risk, specifically throughout the months of pregnancy and breastfeeding. Given the debate surrounding the place of medication as the first-line therapy [17, 54], and findings that ADHD symptoms may be affected by fluctuating hormone levels [16, 54]; it is important to listen to some women who mentioned that their ADHD symptoms were affected by their menstrual cycle. These issues mean that women, in particular, require good alternative accommodations to medication. Occupational therapists, among other ergonomic experts, are recognized as well-placed to assist women in this area [55].

Viewing this study through traditional 'inductive glasses' may raise a criticism that the small number of participants constitutes the main limitation of the current study and prevents generalization. However, the qualitative phenomenological approach talks about trustworthiness, rather than generalization. Trustworthiness was increased by adopting several recommended tools [43, 44]: a standard protocol that can be reproduced; thick descriptions accompanied by demonstrative citations; triangulating the data within and between interviews, showing consistency in their perceptions and experiences; a critical peer confirmability audit among three researchers along the analysis and participants' feedback. Analytic generalization was achieved by the use of quotations that represent concepts in line with well-known theoretical models [27, 30]. Furthermore, the exploratory data acquired are expected to aid the future establishment of quantitative tools to be examined among larger samples and diverse groups of employees. The evidence obtained for best practices and the theoretical understanding may help supervisors and professional counsellors to recommend workers with ADHD reasonable accommodations for variety of employees and jobs, as well as applying the principals in the context of new technologies in the future.

Since the study was conducted in the context of a client centered approach, we showed an early draft of this article to two interviewees, both of whom were supportive. The voice of one of them is chosen to conclude and to validate the study:

"...The categorization into themes helped me to sort out these issues... I often feel lonely when facing the experiences you mentioned and, while reading, I see there are other women who face similar experiences. I'm really glad you wrote about sensory and emotional regulation - I feel lately that it is very significant for me and I think people are less familiar with this aspect... I feel in many ways that this is the first echo of an important sound that should be heard..." [Nurit]

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## Conflict of interest

The authors have no conflict of interest to report.

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