

**The Impact of Attention Deficit Hyperactivity Disorder of
Employees on In-Role Performance, Organizational
Citizenship Behavior and Job Satisfaction: Moderating Role
of Work Engagement**



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PIDE2016FMSMS10

MS Management Sciences(HRM)

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*The dissertation is submitted to the Department of Business Studies,
Pakistan Institute of Development Economics, Islamabad for the partial
fulfilment of the requirement of the degree of
Masters of Science in Management Sciences*

Department of Business Studies

Pakistan Institute of Development Economics, Islamabad.

2019



Pakistan Institute of Development Economics

CERTIFICATE

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DECLARATION

Except where otherwise indicated, this thesis is my original work.

Sara Seemab

Dedication

This work is dedicated to my beloved Parents

JAVED IQBAL

AND

RIZWANA KAUSAR

ACKNOWLEDGEMENT

There is no God but Allah and Muhammad (peace be upon him) is his messenger. I am solely obliged to Allah Almighty for his blessings, my efforts were nothing but his blessings enabled me to complete this project.

I express my kind gratitude to my sweet parents for their continuous support and care. For sure, this project is nothing but an outcome of their sincere support & prayers. I also proudly express my feeling filled with love for my all-family members, who always dreamed superior position for me.

I am deeply thankful for the contributions of my proposed supervisor **Dr. Khurram Shahzad** in the field of research. His style of teaching and the way he takes the class has really helped me to define an ideal teacher.

He is my role model in the field of HRM research and I know they will always server as a source of inspiration for me and for many others.

SARA SEEMAB

28th of January, 2019

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LIST OF ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
WE	Work Engagement
JS	Job Satisfaction
IRP	In-Role Performance
OCB	Organization Citizenship Behavior
ACT	Attentional Control Theory

ABSTRACT

The aspect that has been addressed in this study is the complications of employees with Attention Deficit Hyperactivity Disorder (ADHD) which they have to tackle with at their workplace, that how the negative relationship between an employee's ADHD and employee's outcomes can be weakened by enhancing their engagement towards their work. While work engagement acts as a moderator in the relationship of ADHD and employee outcomes. This study has been supported by Attentional Control Theory (ACT). In order to conduct the study, primary data has been collected. The population of the current study comprises of employees of different public and private sectors of Islamabad, Rawalpindi and Wah cant, while different banking, manufacturing, education and service sectors have been covered. 259 questionnaires out of 300 have been collected back due to non-response issue. Employee's ADHD, Work Engagement (WE), In-Role Performance (IRP), Organizational Citizenship Behavior (OCB) and Job Satisfaction (JS) have been measured through self-reported questionnaires. ADHD has been measured by an 18-items Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist by Adler, Kessler and Spencer (2003). Regression and Moderation analysis have been carried out for data analysis, while all of the nine hypothesis of the study have been supported. This study concluded in to the realization that when work engagement of an employee with ADHD has been enhanced by providing him with some additional resources, it weakens the negative relationship between ADHD and employee outcomes.

Key Words: Attention Deficit Hyperactivity Disorder (ADHD), Work Engagement (WE), Job Satisfaction (JS), In-Role Performance (IRP), Organization Citizenship Behavior (OCB), Attentional Control Theory (ACT).

CHAPTER 1

INTRODUCTION

1.1 Background

A cognitive disability named as Attention-deficit/hyperactivity disorder (ADHD) has put its impacts at millions of people (Halbesleben, Wheeler and Shanine, 2013). ADHD is a disorder that appeared in the 20th century, greatly inspected for its scientific work authenticity and making its clinical disagreements clear (Imran, 2007).

Main indications for people with ADHD are that they feel it difficult to organize something, to concentrate, to manage time and postponement of different things (Patton, 2009). Kitchen (2006) said that mostly employees who have ADHD face troubles prioritizing essential responsibilities. OCB's are optional conducts, they are not related to job relevant deeds (Bateman and Organ, 1983). The stimulus-driven system reacts to stimuli in the atmosphere that require instant consideration. While the goal-driven system highlights the cognitive procedures due to which people go on proceeding to the comprehensive objectives by cognitive mechanism (Miller and Cohen, 2001).

In United States, there was conducted a national household survey between February 2001 and April 2003 that resulted in the fact that 4.2% workers were suffering from ADHD. Annually 35 days per worker were being lost due to ADHD. 120.0 Million Working days were being lost in U.S. that was shown by these associations. There was a loss of \$19.5 billion of human capital. ADHD is a common and pricey work place state (Kessler, Adler, Ames, Barkley, Birnbaum, Greenberg, Johnston, Spencer and Ustun, 2005).

1.2 ADHD and Attentional Control Theory (ACT)

This study has been supported by Attentional Control Theory (ACT). By framing the principles of Attentional Control Theory, this study will evidently be strongly supported. According to Attentional Control Theory (ACT) if people feel troublesome in focusing at their work performance, this is due to disproportion between the stimulus-driven system and the goal-driven system. ACT proposes that complications for people with ADHD arises when the stimulus-driven system overlap the goal-driven system. Briefly we can say that ADHD sufferers are more influenced towards the actions or events that need for an abrupt attention as compared to their In-Role performance. Consequently most of the times they are easily diverted from completing their tasks which relate to their In-Role Performance (Bozionelos and Bozionelos, 2013).

Rösler, Retz, Thome, Schneider, Stieglitz and Falkai (2006) have mentioned different rating scales for diagnosis of ADHD. Matza, Paramore and Prasad (2005) did their work at the economic costs which are levied due to ADHD, basically they focused at the existing literature over it, did its review and summarization, their work also comprises at the prospective economic advantages after its treatment. Pacheco-Unguetti, Acosta, Callejas and Lupianez (2010) did their work at anxiety and attention.

They concluded into the fact that anxiety was associated with the lacks in the executive control network, but state anxiety was something which was connected to an over functioning of the warning and adjusting networks. Research proposes that Attention Deficit Hyperactivity Disorder is concern able disorder which results into unhealthy and unsound behavior but if it is the matter of comparison between working and non-working people then Attention Deficit Hyperactivity Disorder lies more in un-employed people than the working individuals. Although nationally representative

surveys of the existence and results generated due to Attention Deficit Hyperactivity Disorder at workplace had not been held before 2005 (Kessler, Adler, Ames, Barkley, Birnbaum, Greenberg, Johnston, Spencer and Ustun, 2005).

Attention Deficit Hyperactivity Disorder (ADHD) is a progressive syndrome. Persons who are suffering from ADHD are usually defined as having enduring complications like inattention or distraction of focus , and/or impulsivity and/or hyperactivity. There exist different types of features of ADHD during different circumstances like the capability to exert attention, confined activities, hindering impulses and to adjust employees conduct with respect to guidelines, time and the time upcoming. Currently, the basic traits of people with Attention Deficit Hyperactivity Disorder (ADHD) and the diagnostic method legitimately and formally established for clinical practice are constituted in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Attention Deficit Hyperactivity Disorder (ADHD) is of three kinds. The kind of ADHD to be diagnosed relies at, if the characteristics are corresponding or according to the diagnostic criteria for ADHD: Mainly Inattentive, mainly Hyperactive-Impulsive, or Combined Type (Tominey and Tominey, 2001).

Normally an individual has a number of goals that he or she has to attain and in order to attain them, one has to regulate his routine life accordingly. These circumstances invite certain discrete still interrelating mental aptitudes to effectively handle the condition. As like at times, one has to refrain himself from certain things he is attracted to. Has to direct his actions himself, has to get involved in mental conversation, has to generate self-awareness about the challenges he has to confront in that way, has to strengthen his inhibition capacity, has to convert his attention away from thing he should avoid, that is (executive attention or attentional management), has to conversate

with himself by means of his mind's voice, that is (verbal self-instruction or working memory), has to imagine or bring his destination envision that what would it look like when he would have achieve it, that is (nonverbal working memory, or visual imagery), has to go through brainstorming in order to find out different problem solving strategies and has to motivate himself by pronouncing certain inspirational statements. All the practices mentioned above and certain others are involved in an individual's self-regulation process.

Since the late 1970s, clinical researchers such as Virginia Douglas, Ph.D. while doing research work being at McGill University, were conducting their study at ADHD proclaimed that people with ADHD have a severe deficit in their capability of self-regulation. Because they had evaluated and took it into account that people with ADHD lacked certain mental capabilities described above. As like people with ADHD lack certain above mentioned mental activities and such mental activities are associated with the direction of their conducts, thinking rationally one comes to know that ADHD is a disorder of Self-Regulation. Subsequently due to the reason of lack of certain mental aptitudes important for self-regulation, researchers have consecutively been supporting the impression of ADHD to be SRDD (self-regulation deficit disorder) (Barkley, 2011).

1.3 Problem Definition/Research Gap

ADHD is a disorder that highly prevails in the whole world, people with ADHD contain noteworthy impairments and is prevalent in Adults very often (Imran, 2007). Sufferers of ADHD are employed in a number of organizations and evidently they are performing lower than others but there exist limited research work that demonstrates the effects of ADHD at the performance of an individual (Halbesleben ,Wheeler and Shanine, 2013). Main symptoms that depict that people with ADHD are facing troubles while making

personal schedule, cannot define priorities, find it difficult to focus attention at a specific task, cannot manage time well, postponement of different tasks, and mostly are unable to consider the results of their actions. They are symptoms which make it clear that individuals with ADHD show lower performance at workplace (Bozionelos and Bozionelos, 2013). People with ADHD cannot put focus at the results of their activities, anxiety, uneasiness in meetings and refusal to people to get finished as like they cannot wait for their turn (Patton, 2009). According to researchers engagement is expressed to have surplus resources to allocate to the performance (Gorgievski and Hobfoll, 2008; Halbesleben and Wheeler, 2008; Kühnel, Sonnentag and Bledow, 2012).

From the literature's perspective, it can be said with conviction that the employees who are significantly engaged, they dedicate their additional means to the In-Role Performance and Organizational Citizenship Behaviors (Bakker et al., 2008; Halbesleben and Wheeler, 2008; Llorens, Salanova, Bakker and Schaufeli, 2007; Salanova, Agut, Peir and oacute, 2005; Salanova, Bakker and Llorens, 2006). From this perspective, this study proposes that Work engagement weakens the negative relationship between Attention Deficit Hyperactivity Disorder and In-Role Performance, Organizational Citizenship Behavior and Job Satisfaction.

The contribution of this study in to the existing literature is that work engagement acts as a moderator into the relationship between Attention Deficit Hyperactivity Disorder and some job outcomes like In-Role Performance, Organizational Citizenship Behavior and Job Satisfaction in the workplace scenario more over this study is going to elaborate the direct negative relationship between Attention Deficit Hyperactivity Disorder and Job Satisfaction. This study proposes that ADHD is negatively related to employee's outcomes like In-Role Performance and Organizational Citizenship Behavior (OCB)

and hence negatively related to employee's attitude like job satisfaction. While Work Engagement is proposed to be a moderating variable that weakens the negative relationship between Attention Deficit Hyperactivity Disorder (ADHD) and the proposed employee's outcomes (In-Role Performance, Organizational Citizenship Behavior (OCB) and Job Satisfaction). It is to state that ADHD has been studied in the developed countries at the workplace perspective before it but it has not been studied in Pakistan at workplace scenario. Rather ADHD has been studied in Pakistan at children's perspective instead of studying it at adults and workplace viewpoint. This study is proposed to explore the workplace related scenario of ADHD.

1.4 Research Questions

Following are the specific research questions:

1. What is the impact of Attention Deficit Hyperactivity Disorder (ADHD) on employee's Organizational Citizenship Behavior (OCB)?
2. What is the impact of Attention Deficit Hyperactivity Disorder (ADHD) on employee's In-Role Performance?
3. What is the impact of Attention Deficit Hyperactivity Disorder (ADHD) on employee's job satisfaction?
4. What is the effect of work engagement on employee's Organizational Citizenship Behavior (OCB)?
5. What is the effect of work engagement on employee's In-Role Performance?
6. What is the effect of work engagement on employee's job satisfaction?
7. Does work engagement moderate the relationship between Attention Deficit Hyperactivity Disorder (ADHD) and Organizational Citizenship Behavior (OCB)?

8. Does work engagement moderate the relationship between Attention Deficit Hyperactivity Disorder (ADHD) and In-Role Performance?
9. Does work engagement moderate the Attention Deficit Hyperactivity Disorder (ADHD)-job satisfaction relationship?

1.5 Significance of The Study

This study contributes in the literature on ACT. This study will provide a short period of time to the people to stop their other activities for some time, take a pause and think a bit about themselves. They will get aware of themselves whether their attention is being distracted from task-relevant behaviors to task-irrelevant behaviors in normal routine. If it happens with them then they will try to overcome it.

This study contributes to the occupational health psychology literature in a way that it encompasses the Attentional Control Theory's support in it because generally ACT is being utilized in cognitive psychology literature in research laboratory settings. ACT helps individuals at their place of work to take rational decisions when anxiety and their tendency of prioritizing stimulus driven actions over task driven actions effects their capability to control attention.

The other input is to promote the literature on the effect of ADHD at the workplace. From utmost resources , ADHD is one of the psychological syndromes in the United States which mostly prevails into the human being and is still to be documented (Kessler et al., 2006). It is proposed that there is a noteworthy strength of employed people who are suffering from ADHD. Our research work contribute to the literature signifying that people who have ADHD show different types of adverse outputs (Kessler, Adler, Ames, Barkley et al., 2005; Murphy and Barkley, 1996; Weiss and Hechtman, 1993). At times they require some additional means to make progress but they do not know how to manage them in a right way in order to achieve better outcome. So here arises a quest

at organizations that what are the remedies, what would be the solutions, what could be those steps that organizations could have undertaken to take an account of such like problems, while there exist a notable possibility of people with ADHD being taken advantage from. In order to take notice of this issue, firstly we would have to contact human resource managers whether they grasp the idea regarding ADHD (Patton, 2009). Matza et al. (2005) had a survey towards different employers which resulted into the fact that they hardly knew about what reforms should have been undertaken for workforce with ADHD. Furthermore there exist hardly some firms which compromises for people with ADHD. Here exist a factor of concern that normally even workforce with ADHD itself have no idea that they have ADHD, This is because they do not avail any type of exemptions (Patton, 2009). For example, Kitchen (2006) proposed accommodations such as time management tools (e.g., to-do lists) and more noiseless and systematized work areas to help employees with ADHD focus on important tasks. Human resource managers might recommend for the computer of an employee with ADHD to have just essential work related computer applications by reducing all non-work-related applications, as more applications, especially non-work-related applications, might exacerbate the employee's ADHD tendencies. Kitchen (2006) suggested to facilitate people with ADHD by the introduction of time management tools and noiseless and systematized work places in order to provide aid to workforce who are suffering from ADHD to concentrate specially at their in role performance. Human resource managers can suggest for computers of workforce who have ADHD to contain only important computer programs which specially related to their in role performance while dropping all non-work-related programs because to have extra programs could have intensified people's ADHD inclinations. Another step which the employers can

take is that they can introduce directions in verbal and printed set-ups, also giving pictorial assistance and flyers (Tominey and Tominey, 2001).

1.6 Research Objectives

Following are the research objectives of this study:

1. To find out the impact of ADHD on employee's OCB.
2. To find out the impact of ADHD on employee's In-Role Performance.
3. To find out the impact of ADHD on employee's job Satisfaction.
4. To find out the impact of work engagement on employee's OCB.
5. To find out the impact of work engagement on employee's In-Role Performance.
6. To find out the impact of work engagement on employee's job satisfaction.
7. To find out whether work engagement moderate the relationship between ADHD and OCB.
8. To find out whether work engagement moderate the relationship between ADHD and In-Role Performance.
9. To find out whether work engagement moderate the ADHD-job satisfaction relationship.

1.7 Definitions of Study Variables

1.7.1 Organization Citizenship Behavior (OCB)

“The term was coined in the late 1980s. OCB refers to anything that employees choose to do, spontaneously and of their own accord, which often lies outside of their specified contractual obligations. In other words, it is discretionary. OCB may not always be directly and formally recognized or rewarded by the company, through salary increments or promotions for example, though of course OCB may be reflected in

favorable supervisor and co-worker ratings, or better performance appraisals. In this way it can facilitate future reward gain indirectly. Finally, and critically, OCB must ‘promote the effective functioning of the organization’ (Organ, 1988).

1.7.2 Job Satisfaction

“Job satisfaction is an attitudinal variable that reflects how people feel about their jobs” (Knights and Kennedy, 2005).

1.7.3 Work Engagement

A positive, fulfilling, affective motivational state of work-related well-being that is characterized by vigour, dedication, and absorption (Bakker, Schaufeli, Leiter and Taris, 2008).

1.7.4 In-Role Performance

“In-role performance involves performing tasks that relate to formal requirements of the job e.g., making a product or delivering a service to a client” (Bozionelos & Bozionelos, 2013).

1.7.5 Attention Deficit Hyperactivity Disorder (ADHD)

“Attention-Deficit Hyperactivity Disorder (ADHD) is a neurological syndrome resulting in problems with self-regulation. ADHD is characterized by inattention and/or hyperactivity-impulsivity which causes impairment in at least two settings. These characteristics often arise in childhood and were previously thought to diminish during adolescence and disappear by adulthood. However, studies over the past decade indicate that although some symptoms may decrease in severity, ADHD does continue throughout adulthood for many individuals. The impact of this disorder is felt not only by the individuals with ADHD, but also by the various systems in which these individuals live, work, and socialize” (Reali, 2001).

CHAPTER 2:

LITERATURE REVIEW

2.1 Attention Deficit Hyperactivity Disorder (ADHD) and Employee's Outcomes

Attention deficit hyperactivity disorder has impacts at work performance but people don't know much about it. Adult ADHD is considerably an impairing condition at work place. Mostly they don't attain treatment and that results in to high human capital cost. It can be said with conviction that treatment can diminish impairments relevant to ADHD. According to employers an ADHD sufferer can be a worthy employee for workplace trials after estimating the treatment cost-effectiveness. After clinical observation we can say it with conviction that adults with ADHD tend to select their professions themselves which are with the provision of flexibility of programming their own timetable to go towards their workplace and to return back from there (Kessler, Lane, Stang and Brunt, 2009).

ACT theorists suggest that people who are suffering from attention control problem lose attention and distracted from task-relevant behaviors towards extra-role behaviors (Eysenck and Derakshan, 2011). As like if a person have difficulty with his attention control, then a stimuli can drag him towards an imbalanced condition of preferring task irrelevant behaviors over task relevant behaviors (Eysenck et al., 2007; Fox, Russo and Georgiou, 2005).

It is a fact that people with ADHD normally easily direct their means towards organizational citizenship behaviors obviously which are not directly related to their personal and organizational ultimate essential goals, although they are at the end in the benefit of the organization but still pertain secondary position as compared to it's basic purposes (Bateman and Organ, 1983; Organ, 1988). Consequently right according to

our expectations people with signs of Attention Deficit Hyperactivity Disorder normally show tendency to move their means from In-Role Performance to Organizational Citizenship Behavior (Kitchen, 2006).

Kessler et al. (2009) described that people who are suffering from Attention-deficit hyperactivity disorder show 4-5% lesser task behavior as compared to others who do not have this disorder. Attention-deficit hyperactivity disorder (ADHD) is a disorder which prevails in children and in adults as well with the status of a frequently prevailed psychological disorder and is resulted into a number of abnormalities into their performance and activities (Matza, Paramore and Prasad, 2005). Inopportunately, it is not quite easy to have sufficient catalogue or guide to take an idea of the parameters of job satisfaction (Brayfield and Rothe, 1951).

If we consider that Organizational Citizenship Behavior is totally irrelevant to the organizational performance and to an employee's overall input within the organization and his credit taking on the basis of that, then our this concept would totally prove wrong (Kiker and Motowidlo, 1999; Werner, 1994; Whiting, Podsakoff and Pierce, 2008). According to questionnaire of Brayfield and Rothe (1951), the parameters of satisfaction of people are judged by their feelings that they deem their job as like it is a hobby, find it interesting and do not feel boredom, enjoy work greater than relaxation period, consider their selves to be more happy in work as compared to other people, they are enthusiastic for their job, they enjoy their job. But people with ADHD do not have such feelings of satisfaction because they perceive their work to be unpleasant. Mostly feel boredom in doing their work. Often feel compelled to go for job. They find no interest in their work and think that they could attain another job that could have been more interesting than present one. They do not like their job. They think every day

at their work place whether this day will end ever. They feel disappointment to join their present job. Kapoor and Dubey (2016) stated that they had a group of 60 students distributed in two parts, screening for ADHD was conducted at 30 of them for Motivated Strategies for Learning Questionnaire (MSLQ) and other 30 did not go through this screening. As a result they found that there exist a noteworthy difference with respect to Task Anxiety scale between both of the group. It is quite normal that people are unaware of the fact that there exist a psychological disorder named as Attention Deficit Hyperactivity Disorder, they do not know about the results exerted by this disorder (Kessler, Adler, Ames, Barkley, Birnbaum, Greenberg, Johnston, Spencer and Ustun, 2005).

Employees with ADHD generally have inferior position at their workplace (Weiss and Hectman, 1993). When people with ADHD feel it difficult to be focused at their work due to being stressed, then this state of mind of them can be better expressed by Attentional Control Theory (Halbesleben, Wheeler and Shanine, 2013). It has been realized by a number of sources that one of the most commonly prevailing disorder in the United States which is yet to be diagnosed in most of the cases is ADHD (Kessler et al., 2006). We got to know that there exist certain considerable strength of adults, who are employed in different organizations. Adults, who have ADHD, show certain negative outcomes at their workplace (Kessler, Adler, Ames, Barkley et al., 2005; Murphy and Barkley, 1996; Weiss and Hechtman, 1993).

People who have ADHD show 4-5% lower work performance at work place as compared to those who do not have ADHD (Kessler et al., 2009). Employees with ADHD exhibit lower work performance while judged through self-reporting, colleagues and supervisor, It was realized that the most severe negative relationship

was that of ADHD and In-Role Performance, while coming to the point that this is the way of conduct of adults who have ADHD, that they mostly are distracted from job performance (Halbesleben, Wheeler and Shanine, 2013). Kessler et al. (2006) stated that as they took American's demonstrative sample, they got to know that 4.4% adults were suffering from ADHD. As like this 4.4% was derived from self-reporting criteria, thus it is supposed to be under estimated due to certain parameters defined by society. According to researcher's point of view, people with ADHD, who are employed exhibit lower employee outcomes, have disputes with their peers, are in danger to get hurt themselves and there is a significant rate of them to quit job as compared to those who do not have ADHD (Kessler, Adler, Ames, Barkley, et al., 2005; Murphy and Barkley, 1996; Weiss and Hechtman, 1993).

Adults who have ADHD show 4-5% lower work performance than employees who do not have ADHD (Kessler, Lane, Stang and Van Brunt, 2009). Kessler et al. (2009) stated that according to Attentional Control Theory, ADHD, that is resulted into lack of usefulness and proficiency of work performance, when have a comparison with their peers, their performance at their workplace lack that vigour.

Eysenck and Derakshan (2011); Eysenck et al. (2007) stated that the name of ACT reflects its main idea and that is, because adults with ADHD have problem with controlling their attention, less effectiveness is reflected in their performance. Due to that lack of attention, such employees usually are tended more towards other activities than their goal oriented In-Role Performance. Kessler, Adler, Ames, Barkley, et al. (2005) said that the main idea of their research work was to find out the relationship between ADHD and lower work performance of its sufferers by an observation of the two things, i.e. efficiency, the relationship between work engagement and employee

outcomes and effectiveness, both of them are the results of attentional control. Patton (2009) stated that some of the indications that a person is suffering from ADHD are that such a person fails to perform the essentials and basic requirements of his work and the firm he is employed in. He fails to apportion, specify and devote his attention to his work and firm. The main indications of a person being with ADHD are that he has problem with managements of things, to concentrate, inclination of delaying things and difficulty with management of time. Adults who have ADHD, employed in some organization, face problems when it is time to categorize things in order of their importance (Kitchen, 2006).

Jackson and Farrugia (1997) stated that employees suffering from ADHD prove to be uninhibited, passionate and overzealous. Patton (2009) reported that usually employees with ADHD are unable to judge the results of their deeds. They feel nervousness and uneasiness at conferences. It is difficult for them to wait for their turn. We have come to know that adult ADHD is resulted into lower performance at workplace and through clinical observations we conclude that due to adult ADHD role impairment occurs (Adler and Spencer, 2004). By means of neuropsychological evidence we are with the opinion that due to adult ADHD impairment occurs in cognitive functioning (Hervey, Epstein and Curry, 2004). There exists certain deficiencies in workplace performance and functional impairments in adults with ADHD (Biederman, Mick, Fried, Aleardi, Potter and Herzig, 2005). The harmful impacts of ADHD are observed to be different at children and their families during their early age before going to school to their initial schooling to their adulthood, while being more severe at certain phases of their lives. Adults might be sufferers of ADHD due to which they suffer in the two settings, i.e. their professional and private lives. Moreover, ADHD has caused increment in the health relevant expenses of both, ADHD sufferers and their families (Harpin, 2005).

Attention-deficit hyperactivity disorder (ADHD) is an interactively well described disorder. Although this is the reality that normally neuropsychological tests are conducted effectively to examine the practical neuroanatomy of ADHD in neuroimaging research models, but such tests pertain astonishingly inadequate usefulness in the clinical judgement of the disorder. (Koziol and Stevens, 2012). (((We have a limited understanding of why many children with attention deficit hyperactivity disorder do not outgrow the disorder by adulthood. To grasp the reason of continual of ADHD by adulthood is hard. About 20-30% people were suffering from the disorder at its full swings, even when they got adults, while almost 50% displayed certain fraction of the disorder even when they got adults (Sudre, Szekely, Sharp, Kasparek and Shaw, 2017).

On the basis of above discussion, it is hypothesized that:

H1: There is a significant negative relationship between employee's ADHD and In-Role Performance.

H2: There is a significant negative relationship between employee's ADHD and OCB.

H3: There is a significant negative relationship between employee's ADHD and Job Satisfaction.

2.2 Work Engagement and Employee's Outcomes

Individuals engaged with their work are greatly vigorous and energized, are passionate and excited for their workplace relevant responsibilities and mostly they are completely absorbed, engrossed and occupied with their work and mostly even they do not know how the time passed away. Individuals who are engaged with their work are high spirited and have an impactful bonding towards their job and they perceive their job to

be provoking and stimulating rather than taking it to be full of anxiety and hard to execute. There exist two unlike but still interrelated concepts regarding work engagement, demonstrating it to be an optimistic aspect, a mode of comfort, ease and welfare relevant to workplace and a sense of completeness at job scenario. As like a person engaged with work pertains a feeling of completeness as compared to a sense of emptiness as like it exists in the case of being burnout. Vigour is considered to have a state of being greatly passionate and a state of having mental flexibility during job performance, it is something when one wants to exert energy and struggle towards his job and being consistent even while confronting troubles. Dedication is characterized by a person's condition of being engrossed into his job performance and going through having a feeling of being worthy, zealous, motivated, having a sense of self-importance and admitting like there is a task which he is liable to meet. Absorption is considered to be a state of being completely focused and readily involved towards one's in-role performance and organizational citizenship behavior as well, while time is spent in a very quick way and it seems to be a heavy task to remote oneself from job performance. Thus work engagement is supposed to be one's state of mind of being enthusiastic and having keen recognition of one's job performance, that is in-role performance and organizational citizenship behavior, while in contrast burnout has totally reverse features, As like it consists of specifications like a meager value of passion and not being much familiar with one's job performance, that is in-role performance and organizational citizenship behavior (Bakker, Schaufeli, Leiter and Taris, 2008). Kahn (1992) discerned the idea of engagement from psychological attendance or being completely present at the activity whatever it is. It is when an individual is alert, associated, cohesive, and absorbed in his job performance like in-role performance and organizational citizenship behavior. Engagement is a specific psychological frame of

mind, in which one puts all of his possible energy towards the performance of his particular job character, it is perceived to be the indicator of his mental and psychological attendance, a specific psychological condition. Engagement is something that ends in some obvious beneficial consequences for the person himself like he becomes able to confirm his progress and for his firm as well like he assures in-role performance and organizational citizenship behavior. Like we have taken a notice that with respect to Attentional Control Theory (ACT), people who have Attention Deficit Hyperactivity Disorder would have lower capability to convert their means into actions and functions which they are supposed to perform.

In the Organizational Citizenship Behavior Studies, the correlation that has been studied very often is that of Job Satisfaction (Bateman and Organ, 1983; Puffer, 1987; Organ and Konovsky, 1989). After studying the internal attributions, emotional and intellectual aspects of Job Satisfaction, Organ 1989 was of the opinion that organizational citizenship behavior is associated to the great extent, to the perceptive assessment of the reward of job outcomes. When employees with ADHD would be much engrossed into their work, they would prefer to perform extra role activities besides in-role performance, hence, they would be much satisfied with their job. Thus, this is to state that an employee, in spite of being with ADHD, if would be engaged to his work, definitely, would pertain job satisfaction, because his job performance (In-Role and Extra-Role behavior) would be satisfactory.

Organ (1988) has stated that Organizational citizenship behavior include the activities of a person that it performs as a volunteers, they were not included in his job description. An employee does not get official or prescribed remuneration for performing it. Yet these activities are beneficial for routine wise operations of an institute.

It is a fact that they do not ponder over the results of their deeds and because of that they normally consume their means towards actions which does not contain much advantage for them or their organization. People suffering from Attention Deficit Hyperactivity Disorder face trouble in systematizing, concentrating and governing their In-Role Performance and at times they apply their most of the means towards less important function rather than projecting them towards more essential activities (Kitchen, 2006).

According to the notice we have taken, the main concept in Attentional Control Theory is that what is the way people invest their means to get their obligations fulfilled. Scholars present the idea of engagement to have surplus means to project them in order to get their tasks achieved (Gorgievski and Hobfoll, 2008; Halbesleben and Wheeler, 2008; Kühnel, Sonnentag, and Bledow, 2012). Now we are supposed to go through an experiment in order to have an idea that towards which domain, an individual with ADHD is tended and an ADHD diagnosis and therapy would have to be held for this reason (Kessler et al., 2005).

Work engagement: a useful, accomplishing, impactful encouraging position of prosperity relevant to job which is specified by stamina, commitment and immersion. It is a fact that there exist various point of views regarding work engagement, many of the intellectuals are at a point that engaged employees contain enormous vigour and they are greatly tied to their work. A tool which is usually utilized for the purpose of taking assessment of work engagement is Utrecht Work Engagement Scale, which is a personally assessed tool approved in a number of regions throughout the earth. There exist some of the very important forecasters of work engagement. Research has indicated that engagement is a distinctive aspect, which is authentically forecasted

through work relevant means or essential features like authority, check and balance, mentoring or provided by proper guideline, response or comments at job done and private means like hopefulness, self-efficacy, self-esteem. Another thing is that work engagement is forecaster of in-role performance and customer gratification and approval (Bakker, Schaufeli, Leiter and Taris, 2008).

Kahn (1990) adopted a different criteria as far as he theorized engagement to be a condition of someone during which he involves himself bodily, intellectually, spiritually and psychologically towards his or her job character , a self-motivated logical relationship pertains between the person who implies his own guts like (bodily, intellectually, spiritually, psychologically) towards his or her job character at one end and the job character by means of which a person become able to demonstrate his personality, and many other things regarding him or herself.

Patton (2009) reported that hardly some of the organizations facilitate their employees with ADHD, one reason behind it is that it is possible that these people themselves do not know that they have ADHD, as a consequence of which, they do not avail special facilities from their organization. Halbesleben, Wheeler and Shanine (2013) stated that, as like employees with ADHD suffer from deficiency of means to invest towards the execution of their duties, that is why they show lower work practices at their workplace. This is a fact that employees with ADHD face scarcity of required means to stay engaged with their work. Now this is required by such employees that they should be provided with sufficient additional resources to enhance their work engagement, So as to weaken the negative relationship between ADHD and employee outcomes. If people with ADHD get an opportunity to work according to their interest at the place where they feel at ease, they can be prosperous even overachievers (Weiss and Weiss, 2004).

Thus, all this depends over the opportunity of availing the business or workplace according to their comfort and interest where they would be much lucrative, remunerative and vigorous. This is because when they would be doing the work of their interest, they would be more engaged towards it and when they would be engaged with their work, their outcomes would be up to the mark.

Halbesleben (2010) said that the research work of different researchers constantly depicts one thing and that is, there is a positive relationship between an employee's work engagement and his In-Role performance and Organizational Citizenship Behavior. Halbesleben, Wheeler and Shanine (2013) stated that there is a relationship between work engagement and employee's performance in a way that the effectiveness with which they transform their existing means in to employee outcomes, while being engaged to their work. ADHD is referred to as a psychological illness that Considerably bounds the resources that the person is unable to achieve. He substantially suffers from inadequate capacity to do things than a typical individual in the society. Most important natural life events and happenings take in person's daily life roles, as like, being helpful for oneself, carrying out physical duties, performing outdoor activities, watching, listening with concentration, dialogue, normal life living problems, attaining knowledge and employment relevant problems. ADHD might significantly restrict a person's several key life happenings. If certain aspects, such as taking medical treatment are diminished, then this impairment can be intensified, Turing into a handicap (Tominey and Tominey, 2001).

On the basis of above discussion, it is hypothesized that:

H4: There is a significant positive relationship between employee's work engagement and In-Role Performance.

H5: There is a significant positive relationship between employee's work engagement and OCB.

H6: There is a significant positive relationship between employee's work engagement and Job Satisfaction.

2.3 The Moderating Role of Work Engagement

Schaufeli, Salanova, Gonzalez-Roma, Bakker (2002); Bakker, Schaufeli, Leiter and Taris (2008) proposed that adults suffering from ADHD exhibit lower work performance because they do not utilize their available means with much effectiveness. Work engagement is defined as "an optimistic, satisfying, work-related mental situation with features i.e. stamina, energy, potency, commitment, and captivation.

For an instance, an adult with ADHD bears the problem of having lack of concentration towards their casual work related meetings and routine wise trainings, hence normally they remain incapable to hold most of the material shared in them. Such employees might not be capable to fascinate with the data shared to them and stay unable to take a grip over material offered verbally or in address form because of their being inattentive and paying less concentration, even after taking a treatment. In case, an employee would be severely impaired, would be deemed as handicap. There could be practical, rational and realistic arrangements that might accommodate such work relevant reservations and make an individual with ADHD being effective, creative and fruitful. An employer is required to be judicious and to provide his employees with ADHD with such additional resources, so as to overcome their disorder. Otherwise employer might get into troubles (Tominey and Tominey, 2001). Work Engagement is proposed to be a moderating variable that weakens the negative relationship between Attention Deficit Hyperactivity Disorder (ADHD) and the proposed employee's outcomes like In-Role

Performance, Organizational Citizenship Behavior (OCB) and Job Satisfaction. If Work Engagement of employees with ADHD will be increased through introducing certain interventions within the organization, then the work immersion of such employees will be enhanced thus employees will be involved in their In-Role performance even in a better way. They will be able to exercise Organizational Citizenship Behaviors (OCB) as well in this way because when they will realize that now they are getting better with respect to their responsibilities specified in their job description, then they will further move towards Extra-Role behaviors.

As like Attentional Control Theory suggests that employees with ADHD tend more towards actions that require instant attention and reactions than duty relevant actions for what employees are liable of. Employees with ADHD cannot appropriately deal with their resources when they are at the point of their allocation and investment towards In-Role and Extra-Role activities. Attentional Control Theory best illustrates this scenario. Attentional control theory suggests that individuals who are suffering from the issue of focusing or concentrating or being attentive, are resulted in to lesser valuable deeds and actions than those who do not have such issue (Eysenck et al., 2007). Attentional control theory suggests that this is quite possible because an individual's cognitive measures which makes it sure to move one's activities to goal driven deeds does not work accurately (Derakshan and Eysenck, 2009; Eysenck and Derakshan, 2011).

Theorists of Attentional control theory propose that individuals confronting attentional control issues easily become unfocused from their In-Role Performance due to a stimuli in his surroundings, thus their attention is being diverted from goal oriented activities to non-goal oriented activities (Eysenck and Derakshan, 2011).

The essential result derived is that work engagement is an aspect which mainly depends upon a person's psychological characteristics as compared to his demographic and administrative aspects. Work is a tool to determine someone's worth. As the era changed, there appeared a trend of preparing individuals to do work and at that time, work was deemed as a parameter of an individual's progress. As a result, when the 21st century began, there appeared a coercion to introduce an economy lying at awareness and values as a consequence of which some aspects were introduced like cohesion, collaboration, honor, correlative duties (as like the aspect of psychological contract). From psychological perspective work ethics firstly belong to frame of mind and the other aspect is ideology (Czerw and Grabowski, 2015).

Schaufeli et al. (2002) stated that work engagement is completely an optimistic gauge of professional welfare which consists of three aspects of robustness, commitment and captivation. Schaufeli et al. (2002) said that work engagement is a constructive and satisfying job-related mental status having characteristics of vigor, devotion and fascination. As like one of the characteristic of work engagement is vigor, that is defined as the stamina and mental durability and strength while a person is employed. It is, when one person is determined to exert struggle in the execution of its job and its being dedicated and eager to work consistently while confronting problems. Dedication is referred to as an essence of being directed to certain thing, being energetic and passionate, being motivated, being with a sense of satisfaction and ready to handle tasks. Absorption is characterized by having complete focus and being intensely occupied with one's job. In this state of mind, time is spent very much speedily and one finds it hard to stay away from its job. A current assessment suggests that there is a positive relationship between work engagement and intellectual and psychosomatic fitness, innate inspiration, being with opinion of self-productiveness, optimistic

approach for job performance and firm as a whole and satisfactory employee outcomes (Schaufeli and Salanova, 2007).

Work engagement is considered to be a constant mental status instead of being a transitory condition. Engagement is defined as a much determined and prevalent impactful intellectual condition. In this state of mind, an individual is not engrossed only towards a specific thing, occasion, incident, person or conduct (Schaufeli et al., 2002b). Warr (1990) stated that job relevant sentiments (i.e. satisfaction, being excited, being passionate, joyful) are supposed to be less consistent as compared to work engagement, but not as much consistent as one's disposition characteristics (i.e. sentiments, tempers, disposition) are (Gray and Watson, 2001). Schaufeli and Salanova (2007) said that it is a fact that work engagement refers to a job relevant attitude. Work engagement is as aspect that produces constructive consequences at workplace and everywhere else as well and achievement of what is mission, the most looked-for (Schaufeli and Salanova, 2007).

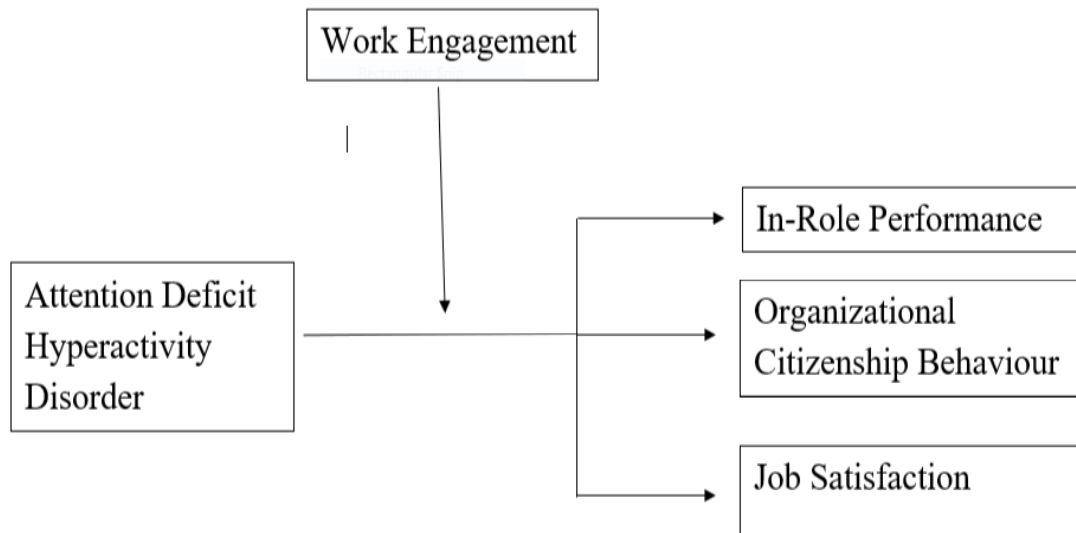
Based on the above discussion, following hypotheses are developed:

H7: Work engagement acts as a moderator between the relationship of ADHD and In-Role Performance in a way that this relationship will be weak when work engagement is high.

H8: Work engagement acts as a moderator between the relationship of ADHD and OCB in a way that this relationship will be weak when work engagement is high.

H9: Work engagement acts as a moderator between the relationship of ADHD and Job Satisfaction in a way that this relationship will be weak when work engagement is high.

2.4 Research Model



2.5 Hypothesis of the Study

H1: There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder (ADHD) and In-Role Performance (IRP).

H2: There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder and Organizational Citizenship Behavior (OCB).

H3: There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder and Job Satisfaction (JS).

H4: There is a significant positive relationship between employee's work engagement (WE) and In-Role Performance.

H5: There is a significant positive relationship between employee's work engagement and Organizational Citizenship Behavior.

H6: There is a significant positive relationship between employee's work engagement and Job Satisfaction.

H7: Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and In-Role Performance in a way that this relationship will be weak when work engagement is high.

H8: Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and Organizational Citizenship Behavior in a way that this relationship will be weak when work engagement is high.

H9: Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and Job Satisfaction in a way that this relationship will be weak when work engagement is high.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Research Design

3.1.1 Type of Study

It is a causal study in which the effect of Attention Deficit Hyperactivity Disorder (ADHD) on employee's In-Role Performance, Organizational Citizenship Behavior (OCB) and Job Satisfaction while employee's Work Engagement playing the moderating role has been measured on the basis of respondent's self-reported assessment regarding these variables.

3.1.2 Study Settings

It is stated to be field study as like respondents i.e. work force from different public and private sectors have been approached at their workplace, so as to provide their responses by filling the questionnaires while being at their usual work domain.

3.1.3 Time Horizon

The data for this research work has been collected during the study period in 3 months. The data is cross-sectional in nature.

3.1.4 Research Interference

There was negligible research interference and this research was basically a field study. While data has been collected through Cross sectional data collection criteria. Previously, several researchers used questionnaires and a number of them used interviews method for primary data collection. This study has been conducted through distribution of questionnaires. Kessler, Lane, Stang and Brunt (2009) also gathered their primary data by the distribution of questionnaires during their survey conducted in the

united states relevant to adult ADHD. In this study quantitative technique has been adopted to collect primary data through self-reported assessment from respondents due to time constraints. Besides it, as like it is cost effective, it has a benefit of having less interference of researcher, therefore it decreases the expected partiality by respondents. It is a comfortable technique for respondents and provides them with a chance to reciprocate in a valid and well considered way.

3.1.5 Unit of Analysis

In this study, individual employees of different public and private sectors were the participants. Organizations like banking, manufacturing, education and service sectors were the focus of this research work.

3.2 Population and Sampling

3.2.1 Population

The population of the current study comprises of employees of different public and private sectors of Islamabad, Rawalpindi and Wah Cantt i.e. banking, manufacturing, education and service sectors.

3.2.2 Sampling Technique

This study is based upon Convenience Sampling. The data has been collected from individual employees in different public and private sectors of Islamabad, Rawalpindi and Wah Cantt.

3.2.3 Sampling

MacCallum et al. (1999) proposed that the subject-to-item ratio should be **5:1** for a representative sample. As like there are different types of formulas to determine sample size for a given population, among which one formula for appropriate sample size

calculation is “to multiply total number of items in the questionnaire with **5** or **10**”. While this study’s sample size is calculated by “Total No. of items in questionnaire ***5**=**50*5=250**”. Based on Convenience Sampling, **300** questionnaires based upon the population size had been distributed among employees of different public and private sectors of Islamabad, Rawalpindi and Wah Cantt, while these **50** extra questionnaires had been distributed taking non response in to consideration. However **259** questionnaires out of **300** had been collected back due to non-response issue.

3.2.4 Demographic Characteristics of Sample

The tables consisting of the demographic characteristics of sample of **259** individual employees at their work place depict the following details:

3.2.5 Gender: Gender is depicted in the Table 1, in which 68.3% are Male participants and 31.7% are Female participants.

Table 1: Gender of Respondents

Gender	Frequency	Percent
Male	177	68.3%
Female	82	31.7%
Total	259	100.0%

3.2.6 Qualification

Highest number of respondents have Masters degree. As like Table 2 shows that they comprise of **51.7%** of the whole sample. After that **23.2%** of the sample have done with their Bachelors, then **22.0%** MPhils and **3.1%** PHDs are there in the sample.

Table 2: Qualification of Respondents

Qualification	Frequency	Percent
Bachelors	60	23.2%
Masters	134	51.7%
MPhil/MS	57	22.0%
PhD	8	3.1%
Total	259	100.0%

3.2.7 Age

The highest percentage of respondents lie between the age of **26-30** years, they comprised of **35.1%** of respondents. **23.6%** respondents were **31-35** years old, while **18.5%** were of the age of **36-40** years. **9.3%** were **20-25** years old, while **8.1%** were **46** years old or more than that. **5.4%** respondents were of **41-45** years.

Table 3: Age of Respondents

Age	Frequency	Percent
20-25 years	24	9.3%
26-30 years	91	35.1%
31-35 years	61	23.6%
36-40 years	48	18.5%
41-45 years	14	5.4%
46 and above	21	8.1%
Total	259	100.0%

3.2.8 Experience

Highest number of respondents had **1-5** years of experience, these people comprised of **39.4%** of the overall respondents. While **25.9%** respondents had **6-10** years of experience. **19.3%** respondents had **11-15** years' experience and **9.3%** had **16-20** years' experience. **4.6%** respondents comprised **26** or more years of experience. **1.5%** had **21-25** years' experience.

Table 4: Experience of Respondents

Experience	Frequency	Percent
1-5 years	102	39.4%
6-10 years	67	25.9%
11-15 years	50	19.3%
16-20 years	24	9.3%
21-25 years	4	1.5%
26 and above	12	4.6%
Total	259	100%

3.2.9 Marital Status

64.5% of respondents were married, **35.1%** single, while **.4%** widow.

Table 5: Marital Status of Respondents

Designation	Frequency	Percent
Single	91	35.1%
Married	167	64.5%
Widow	1	.4%
Total	259	100.0%

3.3 Scales and Measures

Every one of the study variables except ADHD have been measured on 5 point Likert scale ranging from Strongly Disagreed=1 to strongly agree=5. Because ADHD has been measured at ASRS-v1.1 ranging from Never to Very Often.

3.3.1 Attention Deficit Hyperactivity Disorder (ADHD) Scale

ADHD was measured by an Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist by Adler, Kessler and Spencer (2003). The questionnaire consists of 18-items relevant to ADHD. Main focus of the questionnaire reports that DSM-IV consists of symptoms, impairments and history for an exact and rectified diagnosis. As for example an item of this questionnaire is “How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?”

3.3.2 Job satisfaction Scale

Job satisfaction was measured through a 6-items 5 point Likert scale developed by Agho, Price and Mueller (1992). For example an item is “I feel fairly well satisfied with my job”.

3.3.3 In-Role Performance Scale

It was measured by a 7-items 5 point Likert scale by Williams and Anderson (1991). One sample item is “Adequately completes assigned duties”.

3.3.4 Organizational Citizenship Behavior Scale

It was measured by a 15-items 5 point Likert scale by Williams and Anderson (1991). Like one of the items is “Helps others who have been absent”.

3.3.5 Work Engagement Scale

It was measured by a 5-items 5 point Likert scale by Bledow, Ronald, Frese and Schmitt (2011). For example one of the item is “I feel strong and vigorous in my work”.

3.4 Control Variables

Frequency distribution tables have been developed for all of the demographics or control variables.

3.4.1 Reliability Analysis

Values of Chronbach’s Alpha for each study variable have been depicted in Table 6 presented below:

Table 6: Reliability Analysis

Variable	Items	Cronbach’s alpha
ADHD	18	.949
IRP	06	.894
OCB	15	.944
JS	06	.872
WE	05	.921

3.5 Data Collection

For this study **300** closed ended questionnaires were distributed towards different Government and Non-Government institutions of Islamabad, Rawalpindi and Wah Cantt. Although the required sample size was **250** questionnaires but extra **50** questionnaires were distributed in case of non-response issue. It took almost **3** months’

time period to collect back primary data, however **259** out of **300** questionnaires were being collected back due to non-response by some of the respondents and because some of the questionnaires were found un useable at the time of data entering and data analysis. **259** questionnaires were considered useable for data analysis purpose with an overall response rate of **86.33%**.

3.6 Data Analysis Procedure

SPSS has been the data analysis software in this study. Tests and techniques that have been undertaken for the estimation purpose are as under:

- Missing values
- Frequency distribution
- Descriptive statistics
- Reliability analysis
- Correlation Analysis
- Regression Analysis

CHAPTER 4

RESULTS

This study is aimed at the analysis of the relationship between a cognitive disability, a progressive syndrome Attention Deficit Hyperactivity Disorder and some employee outcomes like job satisfaction, In-Role Performance and Organizational Citizenship Behavior, this study was conducted at the employees in both public and private institutions at Islamabad, Rawalpindi and Wah Cantt. Moreover work engagement is considered to have a moderating effect in the relationship of ADHD and stated employee outcomes in a way that when an employee with ADHD would strongly be engaged with his work then this aspect would weaken the negative relationship between ADHD and concerned employee outcomes. The results given below are the indicators of achievement of the mentioned objectives.

4.1. Descriptive and Correlational Analysis

Table 7 depicts the descriptive statistics i.e. the average values, standard deviations, minimum and maximum values of the averages of the study variables.

Table 7: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Average_ADHD	259	1.33	4.78	2.9041	.85392
Average_WE	259	1.00	5.00	3.8803	.92747
Average_JS	258	1.00	5.00	3.5749	.89974
Average_IRP	259	1.00	5.00	3.7954	.81844
Average_OCB	259	1.00	5.00	3.7202	.83414

There are descriptive statistics i.e. values of Mean and Standard Deviation of study variables, values of Correlation among all the study variables and values of Reliability Analysis of all study variables presented in the table 8 given below. This is to state that Correlations among all study variables are significant at $p < .01$ level. Descriptive statistics for ADHD, IRP, OCB, JS and WE are 2.9041(.85392), 3.7954(.81844), 3.7202(.83414), 3.5749(.89974), 3.8803(.92747) respectively.

Table 8: Mean, Standard Deviation, Correlation and Reliabilities

Variables	Mean	S.D.	1	2	3	4	5
1.ADHD	2.9041	.85392	(.949)				
2.WE	3.8803	.92747	-.459**	(.894)			
3.JS	3.5749	.89974	-.455**	.703**	(.944)		
4.IRP	3.7954	.81844	-.583**	.651**	.747**	(.872)	
5.OCB	3.7202	.83414	-.565**	.724**	.803**	.851**	(.921)

** . Correlation is significant at the 0.01 level (2-tailed)

Correlation among all of the study variables is presented in the table 7. The Bivariate Correlation Matrix indicates that there is a statistically negative Correlation between ADHD and WE ($r = -.459$, $p < .01$), ADHD and JS ($r = -.455$, $p < .01$), ADHD and IRP ($r = -.583$, $P < .01$), ADHD and OCB ($r = -.565$, $p < .01$). There is a statistically positive Correlation between WE and JS ($r = .703$, $p < .01$), WE and IRP ($r = .651$, $p < .01$), WE and OCB ($r = .724$, $p < .01$). There is a statistically positive Correlation between JS and IRP ($r = .747$, $p < .01$), JS and OCB ($r = .803$, $p < .01$). There is a statistically positive Correlation between IRP and OCB ($r = .851$, $p < .01$). The results of Bivariate Correlation Matrix provide support for all of the Hypothesis of this study.

4.2. Regression Analysis

In the regression analysis, two steps were carried out for first dependent variable, So was the case for second and third dependent variable. In the first step independent variable (ADHA) and moderator (WE) were entered while first dependent variable (JS) was entered in the box of dependent variable. In the second step, Interaction Term (ADHD×WE) was entered. Exactly this process was repeated for the second and third dependent variables. There are results of regression analysis presented in the Table 9.

Table 9: Results of Regression Analysis

Predictors	JS			IRP			OCB		
	B	R ²	ΔR ²	β	R ²	ΔR ²	β	R ²	ΔR ²
Step 1									
Main Effect									
ADHD	-.17*	.51		-.34*	.52		-.28*	.59	
WE	.606*			.42*			.52*		
Step 2									
ADHD×WE	.14*	.53	.01	.22*	.57	.05	.24*	.64	.05

*P<0.05

Regression analysis was carried out during which, the combined effect of ADHD and WE at JS was observed. It was done in two steps. In step one, ADHD and WE both were entered as predictors and JS was entered as dependent variable. And in step two, the interaction term i.e. ADHD×WE was entered as predictor and JS as dependent variable. In the results we found that in the table of Model Summary, the value of R² for Model 1 was **.51** and for Model 2, it was **.53**. Value of ΔR² for Model 2 was **.01**. In

the table of Coefficients, Beta value for ADHD was (-.17*, $p < .05$), for WE (.606*, $p < .05$), for (ADHD×WE) (.14*, $p < .05$). Same process was carried out for other two dependent variables as well. It was realized in this research work that Hypothesis H3, H6 and H9 were supported.

The combined effect of ADHD and WE at IRP was being analyzed **during** regression analysis. Same procedure was revised as it was carried out above for JS except one thing, that this time the dependent variable was IRP instead of JS. We got the results in the table of Model Summary as, the value of R^2 for Model 1 was .52 and for Model 2, it was .57. Value of ΔR^2 for Model 2 was .05. In the table of Coefficients, Beta value for ADHD was (-.34*, $p < .05$), for WE (.42*, $p < .05$), for (ADHD×WE) (.22*, $p < .05$). In this study, Hypothesis H1, H4 and H7 were supported.

ADHD, WE and Interaction Term (ADHD×WE) were regressed and their combined effect at OCB was interpreted. Similar steps were repeated, as were carried out above for JS except one thing, that this time the dependent variable was OCB instead of JS. In the table of Model Summary, the results we obtained were, the value of R^2 for Model 1 was .59 and for Model 2, it was .64. The value of ΔR^2 for Model 2 was .05. In the table of Coefficients, beta value for ADHD was (-.28*, $p < .05$), for WE (.52*, $p < .05$), for (ADHD×WE) (.24*, $p < .05$). Hypothesis H2, H5 and H8 were supported, as the results were derived.

Figure A

In this figure, there is ADHD at x-axis and JS at y-axis. Certain values that were required to make the figure are, Name of independent variable (ADHD), Name of moderator (WE), unstandardized regression coefficients i.e. Independent variable (-

.742), Moderator (.080), Interaction (.144), Intercept/Constant (3.850). Means/SDs of variables i.e. Mean of independent variable (2.9041), SD of independent variable (0.85392), Mean of moderator (3.8803), SD of moderator (0.92747). There are two lines in this graph. One of them is a smooth straight line which denotes low work engagement and the other one is a dotted line, which depicts high work engagement. Both of these lines are situated in the figure in a way that they would intersect each other at a point.

Figure A

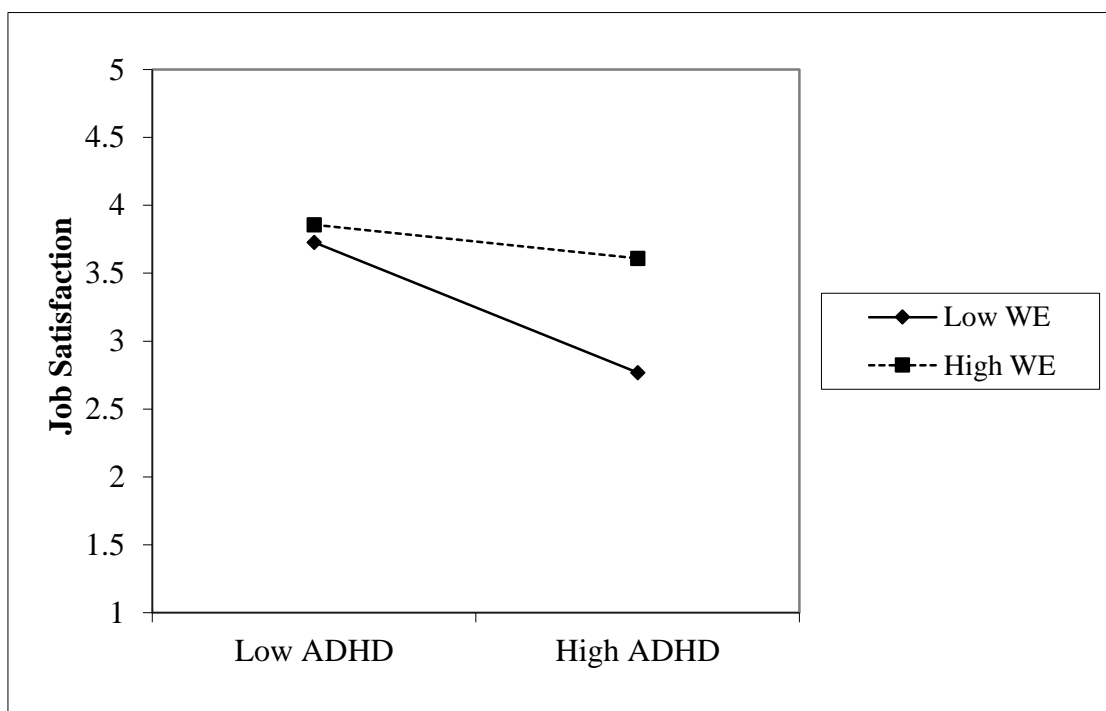


Figure B

In this figure, there is ADHD at x-axis and IRP at y-axis. Certain values that were required to make the figure are, Name of independent variable (ADHD), Name of moderator (WE), unstandardized regression coefficients i.e. Independent variable (-1.227), Moderator (-.392), Interaction (.225), Intercept/Constant (6.429). Means/SDs of variables i.e. Mean of independent variable (2.9041), SD of independent variable

(0.85392), Mean of moderator (3.8803), SD of moderator (0.92747). There are two lines in this graph. One of them is a smooth straight line which denotes low work engagement and the other one is a dotted line, which depicts high work engagement. Both of these lines are situated in the figure in a way that they would intersect each other at a point.

Figure B

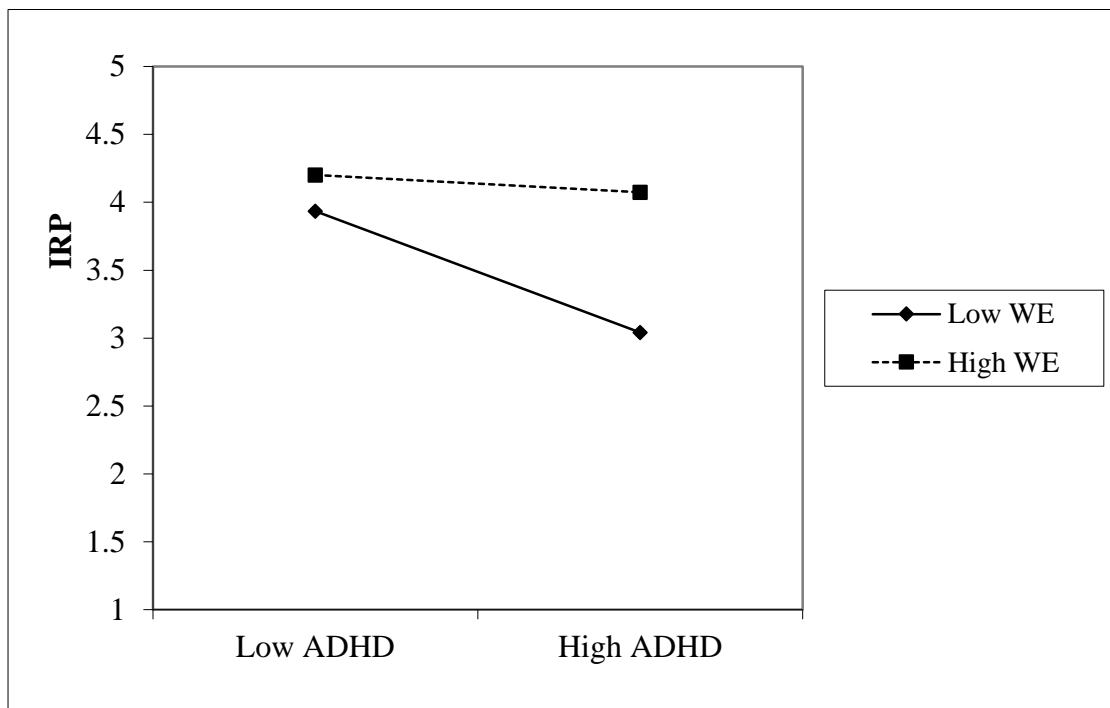
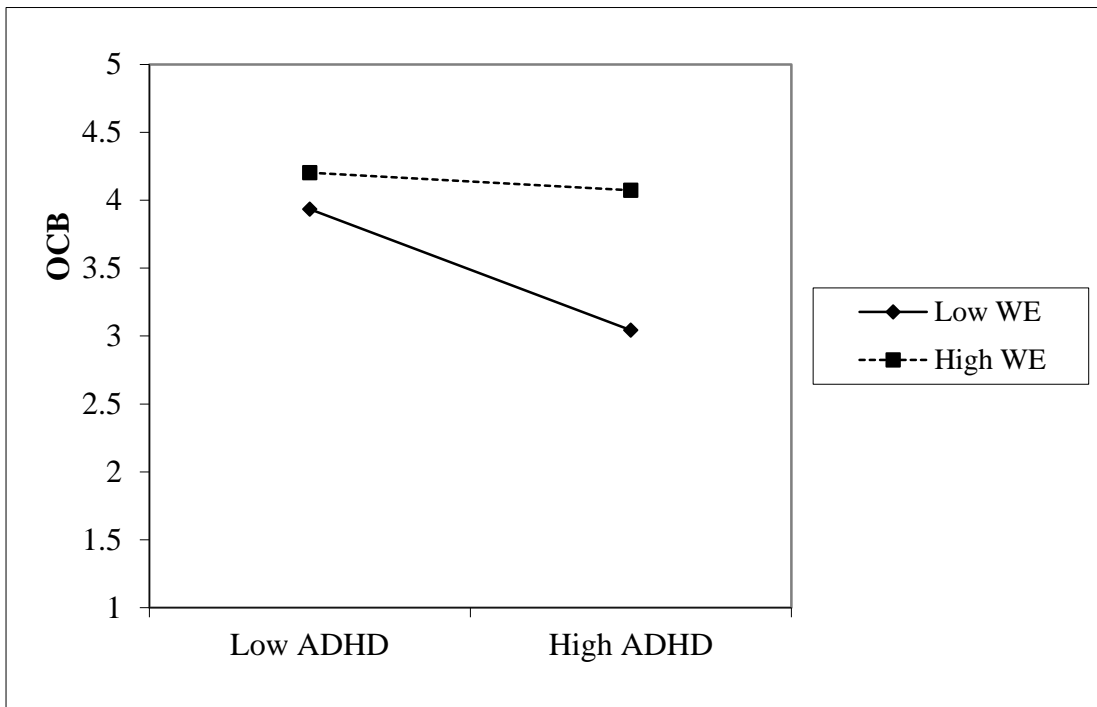


Figure C

In this figure, there is ADHD at x-axis and OCB at y-axis. Certain values that were required to make the figure are, Name of independent variable (ADHD), Name of moderator (WE), unstandardised regression coefficients i.e. Independent variable (-1.234), Moderator (-0.350), Interaction (0.241), Intercept/Constant (6.039). Means/SDs of variables i.e. Mean of independent variable (2.9041), SD of independent variable (0.85392), Mean of moderator (3.8803), SD of moderator (0.92747). There are two lines in this graph. One of them is a smooth straight line which denotes low work

engagement and the other one is a dotted line, which depicts high work engagement. Both of these lines are situated in the figure in a way that they would intersect each other at a point.

Figure C



4.3. Result's Summary

The results of this research work are represented in the Table 9 as follows:

Table 10: Result's Summary

No.	Hypothesis Statement	Result
1	There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder (ADHD) and In-Role Performance (IRP).	Supported
2	There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder and Organizational Citizenship Behavior (OCB).	Supported
3	There is a significant negative relationship between employee's Attention Deficit Hyperactivity Disorder and Job Satisfaction (JS).	Supported
4	There is a significant positive relationship between employee's work engagement (WE) and In-Role Performance.	Supported
5	There is a significant positive relationship between employee's work engagement and Organizational Citizenship Behavior.	Supported
6	There is a significant positive relationship between employee's work engagement and Job Satisfaction.	Supported
7	Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and In-Role Performance in a way that this relationship will be weak when work engagement is high.	Supported
8	Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and Organizational Citizenship Behavior in a way that this relationship will be weak when work engagement is high.	Supported
9	Work engagement acts as a moderator between the relationship of Attention Deficit Hyperactivity Disorder and Job Satisfaction in a way that this relationship will be weak when work engagement is high.	Supported

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion of the Results

Findings of this study depict that all of the Hypothesis are supported. The results of this study suggest that all of the predictions have been justified. Discussion of the results is as under:

Hypothesis H1 i.e. “There is a significant negative relationship between employee’s Attention Deficit Hyperactivity Disorder (ADHD) and In-Role Performance (IRP)” has been supported because the level of significance i.e. $p < .05$, So the beta value $-.34^*$ is significant. As like the beta value is significant and negative, so the conclusion derived from it would be that “ there is a significant negative relationship between an employee’s ADHD and IRP.”

Hypothesis H2 i.e. “There is a significant negative relationship between employee’s Attention Deficit Hyperactivity Disorder and Organizational Citizenship Behavior (OCB).” has been supported because the level of significance i.e. $p < .05$, So the beta value $-.28^*$ is significant. As like the beta value is significant and negative, so the conclusion derived from it would be that “ there is a significant negative relationship between an employee’s ADHD and OCB.”

Hypothesis H3 i.e. “There is a significant negative relationship between employee’s Attention Deficit Hyperactivity Disorder and Job Satisfaction (JS).” has been supported because the level of significance i.e. $p < .05$, So the beta value $-.17^*$ is significant. As like the beta value is significant and negative, so the conclusion derived from it would

be that “ there is a significant negative relationship between an employee’s ADHD and JS.”

Hypothesis H4 i.e. “There is a significant positive relationship between an employee’s work engagement (WE) and In-Role Performance” has been supported because the level of significance i.e. $p < .05$, So the beta value $.42^*$ is significant. As like the beta value is significant and positive, so the conclusion derived from it would be that “ there is a significant positive relationship between an employee’s WE and IRP.”

Hypothesis H5 i.e. “There is a significant positive relationship between an employee’s work engagement and Organizational Citizenship Behavior” has been supported because the level of significance i.e. $p < .05$, So the beta value $.52^*$ is significant. As like the beta value is significant and positive, so the conclusion derived from it would be that “ there is a significant positive relationship between an employee’s WE and OCB.”

Hypothesis H6 i.e. “There is a significant positive relationship between an employee’s work engagement and Job Satisfaction” has been supported because the level of significance i.e. $p < .05$, So the beta value $.60^*$ is significant. As like the beta value is significant and positive, so the conclusion derived from it would be that “ there is a significant positive relationship between an employee’s WE and JS.”

The findings suggest that Hypothesis H1, H4 and H7 have been supported. As like the level of significance was less than **0.05**, beta value i.e. **-.34*** was significant, thus Hypothesis H1 was supported and the derived conclusion was that there is a significant negative relationship between employee’s ADHD and In-Role Performance. The level of significance was less than **0.05**, beta value i.e. **.42*** was significant, Hypothesis H4 was supported and it was realized that there is a significant positive relationship between employee’s work engagement and In-Role Performance. Level of significance

was less than **0.05**, beta value which was **.22*** was significant, hence Hypothesis H7 was supported thus it would be stated with conviction that “Work engagement acts as a moderator between the relationship of ADHD and In-Role Performance in a way that this relationship will be weak when work engagement is high.”

According to the results derived through regression analysis, Hypothesis H2, H5 and H8 have been supported. Regression table indicates that the level of significance was less than **0.05**, beta value i.e. **-.28*** was significant, hence Hypothesis H2 was supported and this research work indicated that there was a significant negative relationship between employee’s ADHD and OCB. The level of significance was less than **0.05**, beta value i.e. **.52*** was significant, Hypothesis H5 was supported and it can evidently be said that there is a significant positive relationship between employee’s work engagement and OCB. Level of significance was less than **0.05**, beta value which was **.24*** was significant, that is how Hypothesis H8 was supported and it would evidently be stated that “Work engagement acts as a moderator between the relationship of ADHD and OCB in a way that this relationship will be weak when work engagement is high.”

Hypothesis H3, H6 and H9 have been supported. Results suggest that as like the level of significance was less than **0.05**, beta value i.e. **-.17*** was significant, hence Hypothesis H3 was supported and this study comes to the point that there is a significant negative relationship between employee’s ADHD and Job Satisfaction. The level of significance was less than **0.05**, beta value i.e. **.606*** was significant, Hypothesis H6 was supported, this suggests that there is a significant positive relationship between employee’s work engagement and Job Satisfaction. Level of significance was less than **0.05**, beta value which was **.14*** was significant, which was resulted into the realization

that Hypothesis H9 was supported and now this is to state that “Work engagement acts as a moderator between the relationship of ADHD and Job Satisfaction in a way that this relationship will be weak when work engagement is high.

5.2 Practical Implications

After conduction of research, it has been realized that employees who have ADHD, exhibit negative outcomes at their workplace. This study suggests that by means of increasing engagement of employees (with ADHD) towards their work, their outcomes i.e. JS, IRP and OCB would be improved and in order to increase work engagement, employees require certain resources. People with ADHD are normally unable to manage their resources in an accurate manner to improve their performance. Now this is the responsibility of the firms to accommodate such a delicate issue in well manners. As like there exist great possibility that certain individuals suffering from ADHD are being employed. There is something which is very much important, and that is to take an account of the knowledge of the human resource managers and employers, whether they have an understanding of ADHD or not. First, they would have to get acknowledged of ADHD, then this is required by them to provide essential resources to their employees with ADHD, So as to improve their employee outcomes i.e. JS, IRP and OCB (Patton, 2009). Now this is to suggest that if employees would be provided with resources then their eligibility to organize them well would be enhanced, which would lead to the existence of a positive relationship between work engagement and employee outcomes (Diestel and Schmidt, 2012).

5.3 Limitations

Self-report assessment of ADHD, IRP and OCB is the limitation of this study. It could have been better enough to collect data relevant to ADHD (Independent variable), IRP (DV) and OCB (DV) from supervisors, colleagues and superordinates of the employee

besides collecting it from the employee himself. The screening instrument adopted in this study is the same which is used for clinical assessments, when there have been adopted multiple sources of information for execution of an assessment, then that is supposed to be a satisfactory assessment (Murphy and Adler, 2004). Earlier, a number of researchers have adopted qualitative research method to conduct their research in this area. Still some of them have adopted quantitative research method. Although qualitative research method is better to be adopted for this research area, but still, to adopt quantitative research method is accurate and authentic and has been adopted because of the time and money constraints. The study could have been longitudinal instead of being cross sectional. But due to time constraints cross sectional method has been adopted.

5.4 Directions for Future Research

This is to suggest for future researchers that they can conduct research at “How to create or increase work engagement of employees with ADHD at their work place in order to weaken the negative relationship between them (employees with ADHD) and their outcomes (employee outcomes i.e. JS, IRP and OCB). As like Kitchen (2006) anticipated arrangements, that should be done for employees with ADHD in order to increase their work engagement should be some sort of time management tools i.e. to make lists and to provide noise free and well managed and systemized work place to have focused employees towards their responsibilities. Human resource managers are liable to ensure only work related computer applications at the systems of employees with ADHD, So as to minimize the possibility of them being distracted from their duties. Some more things that can be done are that employees with ADHD can be provided with directions both in verbal and in black and white way. Also they can be accommodated with graphic or pictorial format and leaflets (Tominey and Tominey,

2000). Such employees can use audio recordings as well to enhance their productivity. Information for assessment can be taken from others (supervisor, colleagues and superordinate of the employee) as well besides the employee (with ADHD) himself. People who have ADHD, at times prove to be good entrepreneurs, also they are good at fast moving set ups (Arnst, 2003; Carroll and Ponteretto, 1998; Lamberg, 2003; Wyld, 1996).

5.5 Conclusion

This study adds to the literature while proposing that as like there is a negative relationship between ADHD and employee outcomes (JS, IRP and OCB), work engagement acts as a moderator between the relationship of ADHD and employee outcomes in a way that this relationship will be weak when work engagement is high, given that there is a positive relationship between work engagement and employee outcomes. The study validates and stresses over the Attentional Control Theory (ACT). It emphasizes the theoretical structure i.e. deficiency of attention control while taking the character of work engagement into account in the relationship of ADHD and employee outcomes. The study was conducted through convenient sampling, while collecting back 259 questionnaires. All of the nine hypothesis of the study were supported.. Hence, the study suggests that when an employee with ADHD would be highly engaged towards his work at workplace, he would exhibit better employee outcomes.

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APPENDIX

Dear Respondent!

I am a student of Pakistan Institute of Development Economics (PIDE) Islamabad and doing this survey. These questions require answers based on your experiences in your current job. Your answers will be kept strictly confidential and will be used only for research purpose. Your identity will not be disclosed on this document. So kindly give an honest opinion to make this research unbiased. You are requested to take 15 minutes out of your busy schedule to fill this questionnaire. Although you are not bound to answer these questions and at any point in time, you can quit answering but still I will be privileged by your opinion in this research work. If you need findings of this research, please order a copy at saraseemab_16@pide.edu.pk. Once again thanks for your precious time and cooperation.

Best Regards,

Sara Seemab

Research Scholar

Section 1

Demographics

Name:

Gender: Male Female

Highest Qualification: Bachelors Masters MPhil/MS
 PhD

Designation:

Age: _____

Total Experience: _____ **Marital Status:**

S.no

Section 2

<p>Please answer the questions below, rating yourself on each of the criteria shown using the Scale on the right side of the page. As you answer each question, place an X in the category that Best describes how you have felt and conducted yourself over the past 6 months.</p>	<p>Never</p>	<p>Rarely</p>	<p>Some times</p>	<p>Often</p>	<p>Very often</p>
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<p>1. How often do you have trouble wrapping up/to wind up the final details of a project, once the</p>	<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>
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	challenging parts have been done?					
2.	How often do you have difficulty getting things in order when you have to do a task that requires organization?	1	2	3	4	5
3.	How often do you have problems remembering appointments or obligations?	1	2	3	4	5
4.	When you have a task that requires a lot of thought, how often do you avoid or delay getting started?.	1	2	3	4	5
5.	How often do you get anxious, fidget or squirm with your hands or feet when you have to sit down for a long time?.	1	2	3	4	5
6.	How often do you feel overly active and compelled/pressurized to do things, like you were driven by a motor?	1	2	3	4	5
7.	How often do you make careless mistakes when you have to work on a boring or difficult project/assignment?	1	2	3	4	5
8.	How often do you have difficulty keeping your attention when you are doing boring or repetitive work?	1	2	3	4	5
9.	How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?	1	2	3	4	5
10.	How often do you misplace or have difficulty finding things at home or at work?	1	2	3	4	5
11.	How often are you distracted/inattentive by activity or noise around you?	1	2	3	4	5
12.	How often do you leave your seat in meetings or	1	2	3	4	5

	other situations in which you are expected to remain seated?					
13.	How often do you feel restless or fidgety?	1	2	3	4	5
14.	How often do you have difficulty unwinding/being ease up and relaxing when you have time to yourself?	1	2	3	4	5
15.	How often do you find yourself talking too much when you are in social situations?	1	2	3	4	5
16.	When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?	1	2	3	4	5
17.	How often do you have difficulty waiting your turn in situations when turn taking is required?	1	2	3	4	5
18.	How often do you interrupt others when they are busy?	1	2	3	4	5
	Section3 (Work Engagement) Keeping in view yourself, please indicate the extent of your agreement and disagreement by entering the appropriate option.	Strongly disagree	Disagree	Not disagree/neither agreed	Agreed	Strongly agreed
19	I feel strong and vigorous/powerful in my work.	1	2	3	4	5
20	At my work, I feel bursting with energy.	1	2	3	4	5
21	I am enthusiastic about my work.	1	2	3	4	5
22	My work inspires me.	1	2	3	4	5
23	I'm happily engrossed in my work.	1	2	3	4	5

<p>Section 4 (Job Satisfaction) Keeping in view yourself, please indicate the extent of your agreement and disagreement by ticking the appropriate option.</p>						
24.	I am seldom/rarely/hardly bored with my job	1	2	3	4	5
25	I would not consider taking another kind of job	1	2	3	4	5
26	I like my job better than the average person	1	2	3	4	5
27	I find real enjoyment in my job	1	2	3	4	5
28	I feel fairly well satisfied with my job	1	2	3	4	5
29	Most days I am enthusiastic/energetic about my job	1	2	3	4	5
<p>Section 5 (In-Role-Performance and OCB) In-Role Performance and Organizational Citizenship Behavior Keeping in view yourself, please indicate the extent of your agreement and disagreement by ticking the appropriate option.</p>						
30	Fulfill responsibilities specified in job description.	1	2	3	4	5
31	Performs tasks expected of him/her.	1	2	3	4	5
32	Meets formal performance requirements of the job.	1	2	3	4	5
33	Engages in activities that will directly affect his/her performance evaluation/analysis.	1	2	3	4	5
34	Do not neglect aspects of the job he/she is obligated to perform.	1	2	3	4	5
35	Successfully performs essential duties.	1	2	3	4	5
36	Helps others who have been absent.	1	2	3	4	5

37	Helps others who have heavy workloads.	1	2	3	4	5
38	Assists supervisor with his/her work (when not asked).	1	2	3	4	5
39	Takes time to listen to co-worker's problems and worries.	1	2	3	4	5
40	Takes a personal interest in other employees.	1	2	3	4	5
41	Passes along information to co-workers.	1	2	3	4	5
42	Attendance at work is above the norm.	1	2	3	4	5
43	Gives attendance notice when unable to come to work.	1	2	3	4	5
44	Do not take undeserved work breaks.	1	2	3	4	5
45	Not much time spent on personal conversations.	1	2	3	4	5
46	Do not complain about insignificant things at work.	1	2	3	4	5
47	Conserves and protects organizational property.	1	2	3	4	5
48	Adheres/attaches themselves to informal rules devised to maintain order.	1	2	3	4	5
49	Goes out of way to help new employees.	1	2	3	4	5
50	Adequately completes assigned duties.	1	2	3	4	5