Coping with the “Unseen Disorders”:
Reducing Safety Risk in the Workplace

August K. Spector, Ed. D.
Chief Executive Officer
Workplace Learning Systems
Potomac, Maryland 20854

Introduction

There are a wide variety of “unseen human disorders,” disorders not self-evident or obvious to others, which affect employees and workplace activities. People tend to recognize visible impairments – a coworker in a wheelchair, a person with cerebral palsy, an employee with blindness. Harder to spot are unseen conditions such as hearing loss, chronic fatigue syndrome, diabetes, learning and other cognitive disorders, disorders resulting from neurological dysfunction, or even depression.

During the past several decades, psychologists, ergonomicists, human resource development specialists, and occupational health, safety and disability specialists have conducted research studies to better understand “unseen human disorders” and their affect on workplace safety. The results of these studies have spawned the development of intervention techniques in order to help individuals and organizations cope with these problems in the hope of bringing about safer workplace operations.

Unseen human disorders can be the root cause of some errors related to workplace safety. Employees having such disorders can be mistaken by their supervisors and others as having a poor attitude toward safety, although a dysfunction in their brain structure or chemistry may be the actual root cause of behaviors, which result in safety errors. Supervisors and crewmembers can utilize various easily implemented coping techniques to help employees deal with potential workplace safety concerns, thereby reducing risk of errors that can result in an accident.

* The term disorder will be used in this paper rather than disability so as not to confuse the reader with legal terminology or the American with Disabilities Act of 1990.
A Common Disorder

Although unseen disorders vary in scope in terms of symptoms and manner of treatment, many have co-morbid symptoms, allowing the possible use of similar intervention techniques. Research has shown that Attention Deficit Hyperactivity Disorder (ADHD) is often co-morbid with learning disorders, oppositional defiant or conduct disorders, depressive disorders, and anxiety disorders. Figure 1 provides a comparison of the prevalence of co-morbidity of ADHD with common unseen disorders. For this article, ADHD will be used to demonstrate the safety implications of unseen disorders. It must be noted that individual disorders should be dealt with according to their symptoms.

Comparison of Prevalence of Common Co-morbid Psychiatric Diagnoses

Figure 1

What is ADHD

Historically, health professionals considered ADHD to be outgrown by the time a child completed his/her teenage years. However, we now know that ADHD continues throughout one’s life. ADHD is a neurological deficiency, rather than the result of parental, social or emotional causes. Although generally diagnosed during childhood, many adults are realizing that they too have ADHD. Often adults learn they may have ADHD as a result of diagnoses of their children, as ADHD is believed to be influenced by genetics. The three primary characteristics of ADHD are a persistent pattern of inattention, hyperactivity, and impulsivity. Individuals who have ADHD generally show a pattern of these particular behaviors in at least two settings, for example, at home and at work. However, adults with ADHD are typically highly intelligent, have great ingenuity and exhibit high levels of energy in accomplishing work activities.

In the workplace, those with ADHD generally have difficulty organizing and prioritizing work, and filtering out environmental distractions. They may appear to have difficulty related to motivation and vigilance in accomplishing work-related tasks, and in managing immediate frustrations. They may be prone to making impulsive statements or decisions. These activities, controlled by the brain's central
control processes, lead to what is commonly known as a disordered Executive Function.* These issues can be possible causes of unintentional employee errors leading to potential accidents. Unfortunately, employees with ADHD may be mistaken as having a poor work attitude – lazy, uninterested in their work, easily distracted, poor listeners, overly active and far-out at work. These characteristics are typically not caused by a “poor attitude” but rather by the neurologic nature of the disorder. If supervisors and crewmembers are aware of such problems, the number of and potential severity of human errors can be reduced.

A Case in Point

"You asked me about William. Yes, Bill. He has been working for us for a number of years now. Oh, what years these have been," begins Bill's supervisor as he describes one of his line assemblers. "Although Bill is a likable person, he sometimes drives us crazy, and that is really the problem we have with him. First of all, Bill is erratic in his behavior. Often he does not complete all of the assembly work assigned to him on time, but at other times his work is accomplished early. There is the time Bill made some very impulsive decisions about setting up his work area. This not only confused our line inspectors but also could have contributed to a safety problem. Yes, the work was completed without any problems, however I had to warn him several times about the placement of his hot soldering gun, less he burn himself and possibly others.”

Confused, I asked, "Why did he do that?"

"Well, Bill later told us that if the work had to be completed by the deadline, then setting up the work area in a more efficient way would help him produce at a higher rate.”

"Was that true?" I inquired.

"We didn't think so, however he completed the production run before any of the others working on the same order.”

"So, I see Bill can be real a problem," I said, satisfied with my conclusion.

"Well in this case Bill was vindicated and he did not cause an accident, but there have been times when Bill’s attitude has been so poor that his lack of attention has caused the failure of proper equipment lockout. And we as a company are very concerned regarding lockout procedures.”

“Oh, I see, yes poor attitude can lead to many safety problems,” I said with confidence.

“Bill came to work seeming quite depressed and a bit confused. Everyone knew that this would be a difficult time for the crew since Bill was having one of his days. You see, every once in a while Bill’s work attitude is poor, he’s just quiet, seems to be in another world, preoccupied with something. In our shop we train everyone to be diligent in following safety regulations and recognize our duty to supporting a safety conscious work environment. With all the moving parts, conveyor belts and an overhead catwalk, it’s important to be safety conscious. So when Bill is having a bad attitude day he is more susceptible to error and accident. On this day the number three conveyor jammed. The proper procedure is to lockout the system before repairs are made. Usually it only takes a few minutes to unjamb the system, but lockout is important less someone get caught in a belt or under a roller.”

“I think trouble is coming, please continue.” I interrupted.

“Bill evidently saw the problem with the conveyor and decided to unjamb the conveyor without having assurance of system lockout. He crawled under the conveyor, removed the obstruction. Just as that happened the system began to

* Executive functions are considered the oversight or managerial functions found in the frontal lobe of the brain. The executive function is considered the ability of the brain to devise and maintain problem-solving type of activities.
move again, however our repair tech was almost crushed between a belt and roller as he was getting ready to lockout the system. Fortunately, Sam the repair tech’s assistant pulled him away from the belt and all went well.”

“I guess you reprimanded Bill for his actions?” I inquired, although I assumed the answer.

“You bet I did! He was sorry for what he did, but explained that he’d had a bad day anyway although he was trying to help keep the system running. Bill left early that day and did not come in the next morning – calling in sick,” the supervisor said sadly. When he did return all he said to me was that he was sorry and that he was a failure.” There was a long moment of silence before the supervisor continued. “Some times I feel sorry for Bill because basically he is a great employee, thinking up new ways of doing things but he demonstrates a bad attitude toward safety more than I believe he should.” The supervisor continued, looking me straight in the eye, he said, “What can I do with Bill to help him change his attitude? We’ve given him training and he attends our safety meetings. I can’t figure it out!”

Let’s Look Again

“To err is human,” is an old proverb. Errors can be of many different types. They may be simple, such as when someone hits his thumb. They may also be advanced cognitive errors, as when an important safety system is designed in the wrong way, causing operator error. All people make unintentional mistakes. Usually, it is only when they have unfavorable consequences that they get attention. These factors may be true about Bill’s errors and his supervisor’s perception of Bill’s attitude toward safety.*

In the case of Bill, later diagnosis showed that he in fact does have ADHD. An analysis of Bill’s behavior and that of his supervisor illustrates many problems related to an employee having ADHD.

1. Bill’s extraordinary creative behavior in terms of how and when he performs work activities. This is characterized by modifying the workspace to successfully complete an unusual assignment in a more efficient manner. Many with ADHD are highly creative and intelligent, having great ingenuity, exhibiting high levels of energy in accomplishing work activities.
2. Bill’s suddenly unjamming the conveyor prior to lockout is characteristic of impulsive behavior. This can be caused by high levels of stress and the making of an unfortunate decision, which may have been chosen as a result of a disorder in the brain’s Executive Function.
3. Distractibility evidenced as appearing to be pre-occupied – many with ADHD appear preoccupied, due to creative thoughts toward work improvement or interest in other areas of work activities, other than their immediate job tasks.
4. Bill exhibited poor self-esteem by the statement that “he was sorry and that he was a failure.” This statement was made despite his actual intent to make the system work by eliminating the jamb. Bill’s not reporting to work was probably also caused by low self-esteem, which in turn may have placed him in a state of minor depression.
5. Bill’s low self-esteem was reinforced by the supervisor’s public reprimand in front of co-workers. A further consequence of this reprimand was the supervisor’s assumption that Bill had a bad attitude toward safety (probably said out loud to Bill), despite being trained and attending safety meetings. By saying that Bill does not follow procedures possibly makes Bill appear dumb and un-trainable by his fellow crewmembers.

* For purposes of discussion, we will eliminate reference to a potential fundamental safety concern: the conveyor system design was probably inadequate. Normally good safety design would not have allowed the conveyor system to automatically restart itself after it was “unstuck” or cleared of an obstruction causing system shutdown. Of course, this may be an example of some cognitive error on the part of the engineer designing the safety system, but at this time no conclusive argument can be made about that engineering crew. Hence we will confine discussion to Bill, his supervisor and crewmembers.
6. Although the supervisor thinks Bill is basically a great employee, “thinking up new ways of doing things,” he does not recognize Bill for his positive attributes, rather dwells upon the negative.

**Workplace Difficulty**

Employees and managers who have ADHD can have a difficult time in the workplace. Adults often feel demoralized, discouraged, have poor self-esteem, and may be ineffective in their work and social relationships. Due to a life-long history of underachievement and intense frustration, many have *learned to be helpless*. These perceptions have come from years of experiencing frustration and failure at school, at work, and in family or social relationships. Some have heard numerous negative messages highlighting their weaknesses and shortcomings, either directly or indirectly, from parents, teachers, spouses, friends and employers who perceive little hope in achievement of workplace goals. These "born to fail" messages can become ingrained beliefs that individuals with ADHD feel are true and unchangeable. As a result, employees may stop trying to succeed and believe life can never change for them, no matter how hard they try. Hence, their helplessness is validated resulting in “giving-up behavior,” the quitting response that follows from the belief that what one does, does not matter.

Too often, employers mistakenly consider such employees as discipline problems or underachievers. It is not unusual for these workers to be considered as having a *poor attitude* toward work activities. Safety managers should not jump to the conclusion of attributing an “attitude problem,” as the error could be attributed to an “unseen disorder” characterized by an employee’s neurological, biological or physical deficiency. Despite their outward behavior, workers with an unseen disorder often do not intend to act in a malicious manner or have a poor safety attitude. Their *attitude* toward safety may be *positive*; however, their *actions* are construed as *negative*. Crewmembers with ADHD, for example, due to their executive function deficiency, may alter the way in which they allocate attention to tasks; deal with information in working memory; and change the strategies used to perform tasks, for example, by causing a shift from accuracy to speed.

In the late 1980s studies of cognitive failure (related to safety and ergonomics) demonstrated that individuals go through three basic stages of decision-making leading to actual behavior:

1. The *input stage* (sensing a stimulus)
2. The *memory stage* (remembering rules, policy procedures, previous learning/training information)
3. The *interpretation and decision making stage* (individuals develop a course of action)
4. The *response stage* (where output is demonstrated).

It was shown that unintentional cognitive errors usually occur at the *input, memory* and *response* stages of information processing. Judgement errors and calculated risks occur at the *interpretation and decision making stage*. This model may be directly related to executive function deficiency among those with ADHD. For example, they will sense a stimulus interpreted as needing correction; however due to a executive function deficiency, they may act impulsively, not fully considering errors in judgement, thus possibly leading to inappropriate safety performance.

Take Bill in our previous case. He is ADHD and exhibits some executive function deficiency. By noticing the inoperable conveyor system, he realizes that production would be negatively affected. Bill
impulsively crawls under the conveyor and removes the obstruction. His response was certainly not appropriate and was against procedure. However, Bill was not malicious in his action and certainly did not have a negative attitude toward safety. But due to an *executive function deficiency* in his brain, he acted impulsively to correct the problem without planning or considering the potential negative affect his actions might have on safety. This was not the first failure experienced by Bill related to improper workplace activities. Nor was this the first time his self-esteem was negatively affected. In fact, one can assume that Bill’s ADHD has contributed to a life in which his actions or inaction have caused failure, thus reinforcing his negative self-esteem. Hence, Bill’s statement “sorry and I’m a failure” would be expected. The supervisor was certainly in his rights to admonish Bill. However it would have been more appropriate to have taken him aside to have a private conversation in which the supervisor demonstrates that Bill is in fact not a failure, but is an important member of the team. A coaching approach to help Bill cope with his problem would provide Bill a positive lesson in how to deal with similar situations. But more importantly, such an approach would positively raise Bill’s self-esteem and confidence to act differently in the future.

E. Scott Geller (Geller, 2000) provides a psychologically based model he terms “A Total Safety Culture.” Geller’s model emphasizes the interaction between modes characterized as the:

1. Person (knowledge, skill, abilities, intelligence, motives, and personality);
2. Behavior (complying, coaching, reorganizing, communicating, demonstrating, and actively caring);
3. Environment (equipment, tools, machines, housekeeping, heat/cold engineering, standards, and operating procedures).

Geller considers these three areas are the major factors bringing about an organization’s safety culture. Although he does not deal extensively with the issue of individual neurological, biological or physical disorders affecting the behavior of employees toward safety activities, he does show that, what is termed, *cognitive issues* have a serious effect on an individual’s safety behavior.

Probably lack of knowledge and understanding on the part of both the employee and his/her fellow workers is partially to blame. A large part of the difficulty lies in effective communication patterns within each group and between groups. Those with ADHD often do not recognize they are having difficulty communicating their inner frustrations and work difficulties, while their fellow workers do not know how to effectively communicate and deal with an employee having these difficulties. To bridge the gap, safety managers can provide awareness-training activities for supervisors and employees related to ADHD and other learning or communication disorders found in the workplace.

Generally, it is important for the safety manager to understand the particular disorder’s symptom(s) and then to provide the best management approach most appropriate to the motivation level of the employee.* Experience has shown that *clarity, structure, and predictability* or “CSP” helps those with ADHD in the workplace to work more productively and with less anxiety.

C - *Clarity* can be facilitated by clearly defining and communicating tasks to be performed and rules of acceptable and unacceptable behavior, and understanding of the consequences and

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* Managers should not place themselves in the position of diagnosing “unseen disorders.” Diagnosis should be performed by a qualified doctor or psychologist. Often medical doctors will prescribe medications to help patients. Managers should not suggest medications. This paper does not discuss medications; however medications are useful in coping with many of the “unseen
rewards for fulfilling these. The manager has a role in helping to promote clarity by having the
employee understand the steps necessary to complete a task or project.

**S - Structure** is important as it helps to keep the employee with ADHD on track. Structure
related to job tasks, the environment in which work is performed, and time frames as to when
work is to be completed are all key to enhancing employee productivity, finally.

**P – Predictability** of work activities is desirable. Although it is sometimes difficult to provide
predictability in an ever-changing workplace, the employee should attempt to have a consistent
schedule during the workday and should be notified about possible future changes in advance.

The safety manager has a variety of options available that he or she can provide to deal with such
disorders. Most of these are well known, but may not be adequately implemented in regard to the
“unseen human disorders.” These are:

- Periodic awareness training and briefings for managers, supervisors, and employees
  specifically related to various unseen disorders and how to deal with them in the workplace;
- Creation of policy, procedures, and guidance available to all employees related to dealing
  with such issues;
- Creation of a value system within the organization which accepts individual differences
  among employees and an environment which encourages cooperation and empathic
  relationships; and
- Oversight of the organization’s human resource activities in order to assure employee needs
  are cared for.

**Useful Coping Strategies**

Safety managers should be aware of a variety of coping strategies found useful when helping those with
ADHD become more successful on the job. The general coping strategies described below provide a
useful framework safety managers can utilize when establishing programs for improving performance.

**Dealing with Low Self-Esteem**

As noted earlier, many employees, after years of frustration with their academic, work, and social lives,
think little of themselves. They often have a nagging sense that something is askew, but never know
exactly what is wrong. Consequently, employees may attribute their problems to a character defect,
concluding that they simply do not measure up to others. To them it seems safer not to try; not wanting to
experience another failure. Helping to rebuild self-esteem and self-confidence is, therefore, critical in
dealing with employees having such performance problems. Rather than criticizing the ADHD employee
for his or her errors, providing positive reinforcement for performance of safe behaviors will not only
demonstrate the crewmember’s acceptable behavior, but reinforce positive self-esteem.

What can the safety manager do?

1. Instill meaningful hope. Point out employees’ strengths and communicate a belief that
   success is possible for them.
2. Periodically provide the employee with a sense of achievement during work activities. This can be accomplished through meaningful praise and recognition. Such activity on the part of the manager will motivate the employee to continue good performance.

3. Quickly recognize accomplishment of short-term goals, especially in meeting safety goals. Such recognition may be simple, such as saying, “I think you completed that assignment really well and in a very safe manner. Keep up the great work.” Such encouragement will support work accomplishment and one's self-esteem, thereby providing additional job structure. In turn the employee, upon receiving positive feedback, will be encouraged to relax and feel good about himself/herself.

Dealing with Organization and Time Management
Maintaining structure in terms of managing time and organizing work activities can be difficult. The fear of not meeting deadlines can be an anxiety-ridden and punishing experience that reinforces negative self-esteem. Many with ADHD are fully aware of traditional time and organizational management techniques, but unfortunately, they may not have the ability, due to their brains’ ineffective executive function, to consistently implement these. Employees who seem disorganized, forgetful, or who have a difficult time focusing on work activities, may consider blocking out time in schedules for priority tasks; breaking long tasks into small units; and building mini-rewards into longer-term projects. However, to implement these approaches on a regular basis, many with ADHD may need regular support through coaching and encouragement from managers and/or trusted fellow crewmembers.

What can the safety manager do?

1. Vary work activities and the pace at which work must be accomplished. This can help to reduce the frustration that often attends working on one activity for an extended period of time.

2. Develop action plans or work goals that indicate specific accomplishments to be completed in short doable time frames. If written, the action plan or work order should have space for listing the result of one's actual accomplishment. Again, short doable time frames, which take into consideration safe practices, are important since the employee will begin to see progress toward the end product. Such realistic time frames can and will be accomplished.

3. Help employees focus and concentrate on their work and safety related concerns. This can be done by not overloading them with long drawn out instructions (verbal or non-verbal) and, if possible, giving them additional time to complete assignments and provide a relatively non-distracting environment in which to work (of course in many construction and factory environments this is extremely difficult to accomplish).

4. There are a variety of low and high-tech adaptive devices that employees with ADHD can utilize to help them better organize and manage their time and life. Although some of these aids may be difficult to implement in many construction and factory work environments, they have been found valuable. Aids which are readily available include the traditional spiral-bound notebook, "Post-it" notes, safety tags, alarm wristwatches, hand-held audio tape recorders, and hand-held personal computers. Although some of these may be costly, their value must be determined in relation to improving safety and productivity.

Dealing with Communication and Social Issues
Temper and mood swings, due in part to impulsivity, interrupting, intruding upon another’s space, forgetfulness, inattentiveness, and general hyperactivity, can frequently raise major social problems at
work, contributing to non-conformance with acceptable safety practices. Often these employees find it hard to make and keep friends. Many with ADHD have come to associate social interaction with embarrassment, disappointment, criticism, or failure. When confronted with opportunities for social interaction, they will often not plan to attend in order to avoid embarrassment and prevent another painful experience, thus withdrawal from others becomes a protective mechanism.

What can the safety manager do?

1. Include all employees in crew meetings and social activities of a work-related nature.
2. Help channel energies toward positive accomplishment. Ask the employee with unseen disorders to make a short presentation or contribute to explaining a safety practice at a crew meeting. Presentations should be designed to be easily developed and conducted. If the presentation is too long or elaborate for the crew, the self-fulfilling prophecy of failure may occur.
3. Establish simple "rules" of conduct at safety meetings in order to avoid possible interruption. These may include establishing a reasonable length of time for each participant to talk or respond. Having a timekeeper to track discussion can be advantageous in providing meeting structure.
4. Reduce social and communication tension. At safety meetings, allow for some "down time" where participants may "unwind" and express themselves through small talk, appropriate humor, and expressions of personal views. If the meeting is longer than 45 minutes, provide ample break time or unwinding time, or introduce another activity or topic. This will allow all crewmembers the opportunity to reduce "mental tension."
5. The idea of celebration is often overlooked in the workplace, especially on projects that require several crewmembers to work over a long period of time. For those with ADHD, and for other employees as well, holding a short but meaningful celebration after safely reaching a milestone is one way to stimulate motivation and to put the long-term project into overall perspective. Such celebration should be simple, short, to the point, and in the work area. Supervisors can bring simple refreshments as their gesture for reinforcing positive results.
6. Crewmembers should be lead to understand that everyone has unique behavior patterns. Although individual actions may appear “strange” they may actually be unintentional, not caused by a “poor attitude” toward safety. Since this may be difficult to realize, various organizational development crew/team-building activities designed to promote improved communication, understanding, and social contact can help the team develop accepted coping mechanisms and better understand individual behavior.
Summary

Although ADHD has been around as long as mankind, it is only now that we are realizing its effects on our employees and the workplace. In adulthood the common characteristics of ADHD found in children usually become less conspicuous as a result of adults learning how to cope or having found a living and work environment in which one's behavior is accepted. Employees with ADHD commonly have difficulty focusing on a single work task, concentrating for extended periods of time, or screening out distractions. They often do not finish a project, may not appear to be listening, or may frequently interrupt during conversations or at meetings. Managers and employees with ADHD may often act impulsively which can lead to aggressive behavior or unsafe work practices.

Fortunately, those with ADHD and other unseen human disorders lead productive work lives, providing meaningful input in the workplace. Safety managers and co-workers should encourage building self-esteem, thereby helping those who have ADHD to work more productively and with greater confidence. Many with ADHD have a strong need for independence and autonomy that should be promoted to its best advantage in the workplace. It is important for managers to provide clarity, structure, and predictability in the workplace. Managers can use a variety of coping strategies to bring about workplace success and productivity improvement among employees who have unseen disorders.