Anger Attacks and Mood Disorders

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Anger attacks have been described in the general psychiatric literature for the past two decades. They have received little attention in the field of intellectual disabilities (ID). This paper will briefly summarize the history of aggression and mood disorders in persons with ID. Diagnostic criteria for anger attacks in the general population will be reviewed and criteria in the ID population will be proposed.

Keywords: developmental disability, intellectual disability, mental retardation, psychiatric disorder

Want to provoke a fight? Just confidently assert that aggression is surely a behavioral equivalent of depression in persons with intellectual disabilities (ID). Recently, aggression has been knocked down as a common expression of depression. Is there an effective counterpunch to that argument? Before counting out all boxing metaphors, a contender in this debate will be introduced—anger attacks. This article will review the history of anger and mood disorder in persons with intellectual disabilities and suggest that the final bell has not rung on the debate.

Definitions of Anger and Related Terms

Before discussing anger attacks, it is important to underscore how terms such as anger, irritability, aggression, hostility and agitation can be confusing. This article will focus on anger, irritability, and aggression. Hostility and agitation also are defined because they are used (somewhat inappropriately), at times, as seeming synonyms for anger, irritability, or aggression. Adaptations of the definitions of Painuly et al. are as follows: 1) Anger is an affect with physiologic changes that results in behavior that warns, intimidates or attacks those who are perceived as challenging or a threat; 2) Irritability is a feeling state characterized by a reduced control over angry impulses often resulting in behavioral and/or expressive outbursts; 3) Aggression is an expressive or physical action that others interpret as potentially destructive or harmful; 4) Hostility is a self-reported preoccupation of dislike, resentment or suspicion towards a person or a group of people; and 5) Agitation is the outward physical expression of inner tension. Finally, anger attacks, introduced above, are defined and described in a separate section.

Aggression as a Behavioral Equivalent of Depression

Almost forty years ago, Berman emphasized that aggressive “acting out” may signal depression in persons with mental retardation. Berman stressed that some persons with mental retardation were incapable of complaining about feeling depressed. Early support of Berman’s belief about aggressive acting out included a study by Dosen that found 100% of children with depression and a developmental disability had aggression or self-injury. Subsequent studies summarized by Lowry noted between 28 to 75% of persons with ID and depression showed aggression.

Some clinicians found an association between depression and aggression appealing because of the difficulty in using traditional diagnostic algorithms in persons with ID. Sovner and Hurley emphasized that persons with ID often lack the verbal and abstract reasoning skills. A lack of these skills can hamper using the usual Diagnostic and Statistical Manual (DSM) criteria for effectively diagnosing major depression.

Clinicians found substitutes for DSM criteria using behavioral equivalents. Examples of these behavioral substitutions for diagnostic criteria included episodes of whining or crying for depressed mood; refusal of most social or work activities as indicative of markedly diminished interest; and impaired concentration manifested as reduced work productivity. Marston et al. hypothesized that in persons with severe or profound ID, self-injury, aggression or screaming may be indicative of depression. Sovner reviewed
Table 1. Environmental Events Which Can Precipitate Aggression in Depression
(Adapted from Sovner19)

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<tr>
<th>Precipitators of Aggression</th>
<th>Depressive Symptoms</th>
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<tr>
<td>Prompts to take transportation to day program</td>
<td>Loss of interest</td>
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<tr>
<td>Prompts to stop laying head on table during seated daytime activities</td>
<td>Decreased energy</td>
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<tr>
<td>Prompts to return to bed during the night</td>
<td>Interrupted and poor quality sleep</td>
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<tr>
<td>Attempts to spoon-feed</td>
<td>Loss of appetite</td>
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<tr>
<td>Attempts to cajole into an activity</td>
<td>Irritable mood</td>
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<tr>
<td>Prompts to calm down</td>
<td>Psychomotor agitation</td>
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how associated depressive symptoms could lead to aggression. (See Table 1) For example, imagine repeatedly prompting someone with ID and depression who has lost her appetite to eat. Is it surprising that she responds by throwing the food, knocking over the table and trying to scratch the staff?

The Unraveling of Aggression as a Behavioral Equivalent

Tsiouris’ group20 tested the Marston et al.13 hypothesis (aggression or self-injury in persons with severe or profound ID is indicative of depression) in 92 persons with ID. Tsiouris’ group found, however, that aggression or self-injury were not closely linked to depression. Tsiouris et al.20 point out a couple of reasons why Marston team’s findings were not replicated. The Marston et al.13 study included inpatients and presumably individuals with greater aggression. Furthermore, 40% of the Tsiouris et al. study had Down syndrome (DS) and this may have skewed the statistics, as persons with DS have a lower frequency of challenging behaviors.

Even if there may be an association between aggression and depression in some individuals, it is clear that aggression does not always equate with depression, and may not even herald a psychiatric disorder.9 Hurley and Silka9 reflect that a careful functional and behavioral analysis of aggressive behavior may point to an environmental cause such as loud and overcrowded day program in someone with autism who does not have the skills to cope with the over-stimulation. If one theorizes that all aggression is merely the equivalent of depression, then a careful evaluation is not necessary. Pary16 concluded that challenging behaviors could not be reduced to a single diagnostic category or to a recommendation of a class of psychotropics, such as antidepressants.

Aggression and Depression Revisited

Within this context of the field’s de-emphasis of the connection between aggression and depression, Pary and Vicari17 were surprised to find a significant correlation between aggression, but not self-injury, and depressive symptoms using a Reiss screen among 100 individuals in a special needs clinic. Is there actually a connection between aggression and depression or was this just a serendipitous statistical finding? Dosen5 offered some guidance. He differentiated between controlled and affective aggression. Controlled aggression is often planned retaliation. In contrast affective aggression is fueled more by frustration and is abrupt. Lowry11 noted irritability in persons with ID was often manifested by a rapid acceleration and expression of anger out of proportion to any provocation. Abrupt aggressive episodes out of proportion to any stressor suggest a concept discussed in the general psychiatry literature—attacks.

Anger Attacks

Using case studies from the general population, Fava et al.7 introduced the concept of anger attacks. Anger attacks are sudden spells of aggression accompanied by autonomic features (e.g., palpitations, shortness of breath, flushing, dizziness, trembling, etc.). The person perceives these episodes as uncharacteristic, out of proportion to the situation and leading to regret afterwards. Anger attacks resemble panic attacks...
but fear and anxiety are not prominent. Subsequent studies by Fava’s group showed dysfunction in parts of the cortex (ventromedial prefrontal) and limbic system (amygdala) in persons with major depressive disorder and anger attacks.

The ventromedial prefrontal cortex (PVC) acts to inhibit aggression, while the amygdala controls processing of fearful arousal. The Dougherty et al. study found that blood flow in the PVC did not increase during anger induction (based on autobiographical summaries) in persons with major depression and anger attacks compared to controls. This suggests that the PVC could not inhibit the aggressive desires. Blood flow ratio changes between the PVC and amygdala also distinguished between persons with major depressions plus anger attacks to those with major depression but without anger attacks.

ANGER ATTACKS, INTERMITTENT EXPLOSIVE DISORDER AND DSM-IV-TR

DSM-IV-TR includes anger attacks; however, no formal diagnostic criteria are given. If anger attacks are seen in the setting of major depression or panic disorder, those diagnoses are coded, respectively. The co-occurrence of anger attacks during major depression is fairly common. Approximately 30-40% of individuals with dysthymia or major depression display anger attacks. Not surprisingly, individuals with depression and anger attacks are more likely to also have a Cluster B (histrionic, antisocial, narcissistic or borderline) personality diagnosis. If anger attacks occur outside of either panic disorder or major depressive disorder, then intermittent explosive disorder is usually diagnosed. Unfortunately, the hallmarks of anger attacks, autonomic arousal and remorse afterwards are not part of the DSM-IV diagnosis of intermittent explosive disorder.

McElroy studied 27 persons with intermittent explosive disorder. She found that one-third reported autonomic symptoms preceded or coincided with the aggressive episodes. She also categorized symptoms during and after episodes. During an episode, increased energy (96%), irritability/rage (79%) and racing thoughts (67%) were much more common than anxiety (21%), depressed mood (17%), euphoria (4%) or decreased energy (0%). Following an episode, the most common symptoms were depressed mood (54%) and decreased energy (54%). Some still had racing thoughts (33%), irritability/rage (25%) or increased energy (21%) after an episode.

McElroy believed that intermittent explosive disorder and variants such as anger attacks are linked to bipolar disorder. She referred to the mood and energy changes as resembling "microdysphoric manic episodes." Sharing a similar view is Benazzi, who found that if anger is present in a depressive episode, then the sensitivity and specificity were both over 60% for anger predicting a bipolar II disorder (depressive and hypomanic episodes).

ANGER ATTACKS AND PERSONS WITH ID

Although the concept of anger attacks still requires further research, two features make sense to those who consult in ID. One vignette involves staff who talk about “the look” some individuals with ID get just before an aggressive act. Although the look is sometimes hard to objectify, it can include flared nostrils, dilated pupils, sweating, flushing, etc. In one vignette, staff emphasize the remorse that the person feels after an attack can be striking. Do the same persons get “the look” before aggression and feel remorse afterwards? This has not been studied in persons with ID.

ANGER ATTACKS, PERSONS WITH ID: DOES IT MATTER CLINICALLY?

Anger attacks may well indicate more severe depression. Their presence, however, has not yet shown a clear differential treatment response.

Yet, anger attacks may not respond to the treatment directed on the primary Axis I psychiatric disorder. As many as half the patients with depression still have anger attacks despite treatment with antidepressants. Furthermore, these anger attacks may persist despite remission of the primary Axis I disorder.

Identifying individuals with ID and anger attacks may be clinically useful. It is not uncommon for some staff to believe someone who is apologetic after aggressive outbursts is just being “manipulative.” Staff may believe the person is just trying to “get away” with the episode. Conversely, experienced clinicians can envision the possibility that an occasional person with ID who will use their “anger episodes” as an excuse. Nevertheless, it will be much harder for the person to “fake” dilated pupils, flushing, sweating, and other signs of autonomic arousal.
Table 2. Proposed Criteria for Detection of Anger Attacks in Persons With ID
(Adapted from Fava et al., Fava et al., and McElroy)

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<th>A. Irritability, manifested by loss of temper control to minor annoyances, during the previous six months.</th>
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<td>B. Absence of planned or retaliatory aggression towards others during the previous one month. (An example of planned aggression is an episode that is designed to achieve a desired goal. An example of retaliatory aggression is an episode that occurs after a person delays several hours or more “to get even” with another individual because of a perceived wrong).</td>
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<td>C. During the previous month, one or more sudden episode of anger, that:</td>
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<td>Is grossly out of proportion to any psychosocial stressor</td>
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<td>Is directed towards others</td>
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<td>Shows autonomic arousal (e.g. flushing, dilated pupils, excessive sweating, shaking or trembling)</td>
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<td>D. At least one attack is either immediately preceded or accompanied by four or more of the following:</td>
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<tr>
<td>Flushing</td>
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<td>Dilated pupils</td>
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<td>Excessive sweating</td>
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<tr>
<td>Shaking</td>
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<tr>
<td>Trembling</td>
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<tr>
<td>Throwing or destroying objects</td>
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<td>Remorseful afterwards</td>
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<td>E. Note if presentation is a) highly compulsive or b) impulsive</td>
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The importance of identifying anger attacks goes beyond merely preventing someone from being unfairly labeled as “manipulative.” Mammen et al. argue that anger attacks are often under-recognized and patients may be relieved to be directly asked about them. Furthermore, they may be worried about any future outbursts on family members or caregivers.

**Proposed Diagnostic Criteria**

Table 2 provides proposed diagnostic criteria. Fava et al. emphasized the autonomic arousal. The presence of irritability during the previous six months was added later. McElroy proposed a treatment algorithm for intermittent explosive disorder that included presence or absence of affective symptoms as well as the presence or absence of compulsive or impulsive symptoms. It is unknown whether anger attacks with a compulsive or impulsive presentation will have different treatment responses, but it seems reasonable to include this specifier in the proposed criteria.

The novel criterion is to **exclude** anger attacks if there has been pre-mediated aggression in the last month. This makes the assumption (that may well be incorrect) that individuals do not have both anger attacks and pre-mediated ones during the same month period. While a life-time history of pre-mediated attacks is **not** an exclusion, eliminating those individuals who seem to plan and then act in retaliation in the past month should give a clearer picture of those persons with purely anger attacks.

**Conclusion**

The association between aggression and affective disorders in persons with ID has had a long history, including falling in and out of popularity. Another avenue to explore in individuals with ID is whether there is a history of abrupt, autonomic arousal prior to the attacks. At the very least finding such an association may help staff and family better understand the individuals. Anger attacks are currently being investigated in the general population. Advances in research in the general population may prove clinically useful in persons with ID.

**References**

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