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Review

Why pharmacotherapy is overused among persons with Autism Spectrum Disorders

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ABSTRACT

Autism Spectrum Disorder (ASD) is a relatively common disorder with lifelong and lasting impairments. As a result, professionals are developing and using a host of intervention strategies. In addition to applied behavior analysis, pharmacotherapy has played a critical role in the advancements of treatment. The use of pharmacological interventions has played a central and important role in recent treatment innovations. Despite the many positive aspects of these drugs, they have often been overused. The present paper reviews many of the reasons for this phenomenon.

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Contents

1. Why pharmacotherapy is overused among persons with autism spectrum disorders

Autism Spectrum Disorder (ASD) is a common and serious problem that manifests across the lifespan (Horovitz & Matson, 2010; Matson, Boisjoli, & Wilkins, 2010; Matson, Belva, Horovitz, Kozlowski, & Bamburg, 2012; Mayes, Black, & Tierney, 2013; Worley & Matson, 2012). There is considerable variability in symptoms across individuals (Matson, Gozalez, & Wilkins, 2008). However, even with this heterogeneity, persons with ASD have symptoms that cover the general content areas of communication, social skills, stereotypies and rituals (Akbar, Loomis, & Paul, 2013; Gau, Liu, Wu, Chiu, & Tsai, 2013; Matson & Boisjoli, 2008; Matson & Dempsey, 2008; Matson, Gonzalez, & Rivet, 2008; Matson, Gonzalez, & Wilkins, 2008, Matson, Gonzalez, & Wilkins, 2009; Matson, Boisjoli, Rojahn, & Hess, 2009; Matson, LoVullo, Rivet, & Boisjoli, 2009). In addition to

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these core deficits, a variety of collateral behaviors are also often present (Bellini, 2004; Bicer & Alsaffar, 2013; Matson, Minshawi, Gonzalez, & Mayville, 2006; Mazurek, Kanne, & Wodka, 2013; Mazzone, Ruta, & Reale, 2012; Pouw, Rieffe, Stockman, & Gadow, 2013). These deficits often include the presence of comorbid psychopathology and challenging behaviors (Cherry, Matson, & Paclawskyj, 1997; Kuhn & Matson, 2002; Matson et al., 1999b; Matson, Cooper, Malone, & Moskow, 2008; Matson, Hess, & Boisjoli, 2010). Some of these comorbid conditions, particularly intellectual disabilities, can exacerbate core symptoms of ASD (Matson, Carlisle, & Bamburg, 1998; Matson, LeBlanc, & Weinheimber, 1999). Additionally, adaptive behavior deficits and motor problems are also common observed (Matson, Dempsey, & Fodstad, 2009; Matson, Rivet, Fodstad, Dempsey, & Boisjoli, 2009).

The frequency with which ASD occurs in the general population and the severity of symptoms has resulted in a litany of interventions for these frequent and varied symptoms (Matson & LoVullo, 2009). Many psychological interventions have been developed for both core symptoms and comorbid disorders. This approach is bolstered by the fact that many of these problems have identifiable environmental causes that contribute to the problems, with respect to both frequency and severity (Matson & Boisjoli, 2007; Matson et al., 2005). A wide range of treatment methods and skills are trained, using both professionals and parents (Matson, Mahan, & LoVullo, 2009). However, these methods are very labor intensive and they often do not have a marketing arm behind them as with the pharmacology industry. Additionally, when these psychological interventions are used for severe problem behaviors, they also can have potentially harmful side effects (Sturmey, Lott, Laud, & Matson, 2005).

The market for interventions for ASD is massive. The pharmacology industry has taken notice. In the last few decades a broad range of medications have been tried (Matson & Wilkins, 2008). These are very restrictive interventions, they are not targeting specific behaviors and severe and often chronic side effects are common (Advokat, Mayville, & Matson, 2000; Matson, Bielecki, Mayville, & Matson, 2003; Singh, Matson, Cooper, Dixon, & Sturmey, 2005). Having noted these factors, and questionable efficacy in some cases, the use of these drugs for persons with ASD is increasing.

2. Trends in use

2.1. Vague treatment targets

One reason for the overuse of medications involves what are often broad and ill-defined target behaviors. Researchers acknowledge that pharmacotherapy is not appropriate for treating core symptoms of ASD. The use of pharmacological interventions is appropriate for some symptoms of co-occurring psychopathology such as anxiety, depressions, and schizophrenia. However, a very large segment of psychotropic drug use involves prescribing for extremely vague and or ill-defined target behaviors. An interesting approach has been to frame the debate as treating symptoms of irritability associated with ASD. But, from a scientific standpoint this argument, has very little merit. The problem is that irritability has been so broadly defined that it means very little. Researchers have described irritability as motor agitation, self-injurious behavior, tantrums, aggression, as items on the irritability subscale of the Aberrant Behavior Checklist and other behaviors (Stigler & McDougle, 2008). Thus, while this use of the term irritability may be a clever marketing play, it has little value with regard to research and promoting effective clinical care.

2.2. Psychiatry's shift to biological methods

Until the 1960s psychiatry was dominated by the psychodynamic theories of psychopathology. These methods involved talk and insight, and generally de-emphasized the use of psychotropic drugs. However, at this time major breakthroughs in pharmacotherapy began to occur with the development of drugs that proved helpful in the treatment of psychosis, anxiety, depression, mania/bipolar disorder, and ADHD among other problems.

Another force beginning to emerge at this point was the recognition that therapies should be less time and budget sensitive, to provide a more inclusive, democratic approach to mental health care. Similarly, more efficient and effective psychological methods such as cognitive behavior therapy and applied behavior analysis began to emerge. All of these trends were counter to psychodynamic methods, casting this theory out of favor in many circles. Psychiatry rapidly shifted, and the trend has continued away from lengthy talk oriented treatment sessions, toward much briefer interactions that focused on medication prescription and titration. This model also was a better fit for the ASD population where limited or ineffective verbal communication is common. The focus rapidly became one of determining which medication, or combination of medications and at what dose would be most effective. A trend toward greater and greater use of psychotropic drugs among persons with ASD has been the result (Bachmann, Manthey, Kamp-Becker, Glaeske, & Hoffman, 2013; Memari, Ziaee, Beygi, Moshayedi, & Mirfazeli, 2012). The failure to develop protocols that have defined markers on dose and drug combinations relative to specific behaviors and disorders has further complicated the treatment landscape. Thus, while pharmacological interventions are increasing, many decisions to medicate are ill defined.

2.3. Research funding

Pharmacological interventions by their nature have much better financial support than psychologically based treatments. It is in the drug industry's best interests to produce safe, effective treatments for ASD and the behaviors and disorders that