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MENTAL HEALTH ASPECTS OF AN ADOLESCENT MEDICINE CLINIC PATIENT POPULATION

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The correlation between exposure to forms of violence and development of mental disorders in victims is well established. The purpose of this chapter was to identify mental health problems in an adolescent medicine clinic population in Lexington, KY and to investigate potential correlation of mental disorders with psychosocial factors. Data were gathered from the charts of 169 adolescent clinic patients (age 10-22) seen in the clinic for mental health care and analyzed using Excel. 68\% of the patient population was urban, while 32\% was rural. In terms of gender, 40\% of the patients were male and 60\% were female. 80\% of the patients were white, 13\% black, and 7\% had other racial background(s). The most prevalent mental disorders in this group were depression 32.12\%, 13\% with generalized anxiety disorder, 8.2\% with an attention deficit disorder (including ADHD), and 5.76\% with an adjustment disorder. The above mentioned demographic trends showed that depression continues to be the most common mental health problem in this population regardless of gender, ethnic origin or economic status. This also highlights the need for availability of mental health support to this patient population. Further work is needed to spotlight the most significant psychosocial factors and root causes of mental health conditions in this age group.

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INTRODUCTION

By 2020, adolescents, representing individuals in the 10-22 year old age range, are expected to comprise 14% of the United States population (1). Adolescence is a challenging transition phase with physical, cognitive, and emotional changes all of which may have a significant impact on mental health (2). Epidemiological data from the World Health Organization showed that 20% of all adolescents worldwide have one or more mental or behavioral health problems (3). In addition, it has been shown that up to 50% of all adult mental disorders have their onset in adolescence (3). This early onset of disease becomes more critical when a common mental disorder such as depression, is expected to show a rising trend during the coming 20 years of their lives (3). Moreover, although the incidence of depression peaks during middle age, depression is becoming increasingly recognized during adolescence and young adulthood (4).

Approximately 20% of depressive patients end their lives by committing suicide (5). With respect to adolescents, suicide attempt rates were highest among adolescents 15 to 19 years old (6). In addition, completed suicide remains among the top three causes of death in the population aged 15–34 years in both males and females (3). Other mental disorders such as adjustment disorders, lead to psychosocial impairment, problems with the legal system, and restlessness (7). As for attention deficit and hyperactivity disorders, they in turn negatively impact scholastic performance, social relationships, and social behavior (8). Overall, the effect of mental disorders on society accounts for over 15 percent of the burden of disease in the United States, surpassing the disease burden caused by all cancers (9). In economic terms, children with mental health disorders impose a greater load on their parents to cut work hours, to quit work, and to spend more time arranging their child's care compared to children with other healthcare needs (10).

The causes of mental disorders in adolescents are complex and may evolve due to a wide variety of psychosocial stressors, physical injuries, developmental changes, exposure to various forms of abuse, genetics and cultural influences (4,11-13). To better characterize the relative impact of the various psychosocial factors on the development of mental disorders, this study examined and reported on a sample of an outpatient adolescent clinic patients in Lexington, Kentucky. The patients were recipients of either counseling or medical services for mental disorders for which they were diagnosed. Specifically, the study sought to describe retrospectively this patient population with respect to demographic profile, age, gender, racial background, socioeconomic status, marital status, educational level, and prevalent mental disorders. The descriptive analysis in this paper is deemed to give rise to further investigation of the most significant psychosocial factors that precipitate the onset of mental disorders in adolescents.

OUR STUDY

Medical chart review was conducted for 174 patients, who received counseling or therapy for diagnosed mental disorders. Patients received psychological therapy services regularly on an outpatient basis for mental health. In addition, medical services were provided for other
physical conditions patients presented with at the time of the visit. Patient data was entered in a spreadsheet program for further analysis.

Patients were excluded from the study if they did not meet the age requirements (10-22 years) at the time of data collection and if their charts lacked documentation regarding mental disorders or conditions. With all exclusions, the final sample size was 169 patients.

The different variables were entered in separate columns, grouped, codified, and analyzed statistically using Excel functions.

**OUR FINDINGS**

The age range of the patients included in the study was 10-22 at the time of the study. The mean age was 15.6 and the median age was 16 years, while the mode value for age was 17 years (see table 1). As expected, the majority of the patient population was urban (68%). The remaining 32% came from the surrounding rural areas such as Montgomery, Anderson, and Jessamine counties in addition to others (table 2). In terms of gender, 40% of the patients were male and 60% were female (see table 2).

Table 1. Age profile of subjects in the study (n=169)

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Distribution</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Age Distribution</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>15.6</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 2. Demographic characteristics of subjects in the study (n=169). *The insurance plan was documented as an indicator of socioeconomic status (SES). High SES patients were carriers of a private insurance plan while low SES patients were carriers of other non-private insurance plans such as state medical assistance or no insurance. **Other includes Hispanic, mixed racial origin and unspecified racial origin. ***Other includes dropouts, home schooling and other educational arrangements

<table>
<thead>
<tr>
<th>Geographic Distribution</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Gender Distribution</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Socioeconomic Status*</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>Ethnic Background**</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td></td>
<td>98%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Level***</td>
<td>High School</td>
<td>Middle School</td>
</tr>
<tr>
<td></td>
<td>67%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Insurance plan was documented as an indicator of socioeconomic status either as high or low. 61% of all patients had private insurance reflecting a high socioeconomic status. The
remaining 39% reflected a low socioeconomic status. These patients received financial assistance, or were carriers of other non-private insurance.

Ethnic background showed that 80% of the patients were white, 13% black, and 7% had other racial backgrounds including Hispanic and mixed racial background (see table 2). With regards to marital status, 98% of the patients reported their status as single, 1% as married, and 1% as other (see table 2). The educational profile of the patients showed that 67% were in high school, 23% in middle school, and 5% in college. The remainder 5% includes dropouts and patients with other educational arrangements including home schooling (see table 2).

**Mental Disorders**

The most prevalent mental disorders in this group were depression, generalized anxiety, ADHD, and adjustment disorders in the listed order. 32.1% of the patients were diagnosed with a depression disorder, while 13.0% of the patients were diagnosed with a generalized anxiety disorder. 8.2% of patients had attention deficit disorder (including ADHD) and 5.8% of patients had an adjustment disorder. Eating disorders, including both bulimia and anorexia nervosa 3.9%, Insomnia accounted for 2.7%. The rest of mental disorders grouped under “other” included: anger management, Asperger’s syndrome, bipolar disorder, conversion disorder, obsessive-compulsive disorder, pain disorder, panic disorder, post-traumatic stress disorder, and trichotillomania (see figure 1).

![Figure 1. Prevalence Mental Disorders (n=169).](image)

**Discussion**

The goal of this study was to characterize a representative outpatient adolescent population receiving treatment for mental health. The age range of the patients was 10-22 years at the time of the study. The mean, median, and mode values for age were indicative of a higher incidence of mental health disorders during high school (see table 1).

The incidence of mental health disorders seemed higher in urban areas as represented by two thirds of the patients (see table 2). This may reflect the additional stressors of urban life
as compared with rural settings. Alternatively, proximity of urban dwellers to the urban healthcare facility may play a role in this distribution. In turn, this may indicate a greater need for mental health services to this sector of the adolescent population. This demographic trend may be also attributed to insufficiency of medical services in rural areas.

Approximately 60% of all patients were female while 40% were males (see table 2). These results point to a higher prevalence of mental disorders among women versus men. This trend is in agreement with mood disorder rates of 5%-12% for men and 10%-25% for women ages 15 and older (14). An alternative explanation for this trend is that women have higher susceptibility to psychosocial factors. For example, violence, socioeconomic disadvantage, low income, low or subordinate social status and rank are all psychosocial factors that affect women disproportionately compared with men (15). In addition, women are more vulnerable to forms of abuse and associated development of mental disorders (15,16). Also, according to the National Survey on Drug Use and Health, women with substance abuse disorders were more likely than men to seek treatment (17).

As for the socioeconomic status, 61% of patients had private insurance plans while low SES patients were carriers of medical assistance plans or no insurance. The potential correlation between the socioeconomic status and the types of mental disorders poses an interesting question to be explored in future studies.

With regards to race distribution, 80% of the patients were white, 13% black, and 7% had other racial backgrounds (see table 2). This breakdown roughly paralleled the national distribution with 75% white, 12% African American, 3.6% Asian, and 2.4% with mixed racial backgrounds (18). Although racial diversity closely matched the national averages, it is important to recognize the wider variation that may exist in other communities. For example, rural communities and inner city communities may deviate significantly from these trends. In terms of educational profile it clearly showed that high school students were major recipients of mental health services in this clinic.

The most prevalent mental disorder in this group was depression followed by anxiety disorders. Unfortunately, the prevalence of mental disorders in adolescents has not been as well documented as that for adults (2).

This study sought to provide a brief description of an adolescent patient population receiving mental health care services in an outpatient clinic. This goal was accomplished by reporting on the demographic characteristics and the most prevalent mental disorders in this patient sample. We conclude that mental health issues were a significant problem in adolescents with depression as the most common disorder. Access to mental health care is therefore crucial to help prevent consequences (such as suicide) and to help teens grow into healthy adults.

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