Prevalence and Comorbidity of Attention Deficit/Hyperactivity Disorder and Social Anxiety Disorder Among Teacher Candidate University Students

Öğretmen Adaylarında Dikkat Eksikliği ve Hiperaktivite Bozukluğu ve Sosyal Kaygı Bozukluğunun Yaygınlığı ve Komorbiditesi

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Abstract: To investigate prevalence and comorbidity of attention-deficit hyperactivity disorder (ADHD) and social anxiety disorder (SAD) in a Turkish community sample of young adult population. University students aged 21-24 years completed a socio-demographic form developed by the study team; Adult ADD/ ADHD DSM IV - Based Diagnostic Screening and Rating Scale and Liebowitz Social Anxiety Scale. Subjects, who scored above the cut off points in each scales, were invited for a diagnostic interview conducted by experienced psychiatrists using DSM-IV criteria for ADHD and SAD. 30 percent (152/494) of all participants had a score above of the cutoff point in screening scales and 60 percent of them attended clinical interview. 38 percent (35/92) of those who had clinical interview received diagnoses of ADHD and/or SAD. Prevalence of ADHD and SAD among the whole sample was 3.23% for ADHD (16/494) and 4.45% for SAD (22/494), whilst 0.6% (3/494) had comorbid ADHD and SAD. Findings presented here support the existing literature that SAD and ADHD are relatively common comorbidities. Rejection of professional help offered to the teacher candidates with Social Anxiety Disorder need further analysis. Their fear of stigmatization and concerns about the impact of a formal diagnosis and having treatment on their professional career needs to be addressed in a culture-specific approach.

Key Words: Attention Deficit Disorder with Hyperactivity, Social Phobia, Comorbidity, Prevalence

Öz: Bu araştırma amacı Türkiye’deki genç yetişkinlerden oluşan bir örneklemde dikkat eksikliği ve hiperaktivite bozukluğu (DEHB) ile sosyal anksiyete bozukluğunu (SAB) yaygınlığı ve komorbiditesini incelmektedir. 21-24 yaş arasındaki üniversite öğrencileri araştırma eki tarafından hazırlanan sosyo-demografik formu, Yetişkin DEB/DEHB DSM IV Temelli Tarama ve Değerlendirme Ölçüsü ile Liebowitz Sosyal Anksiyete Ölçüsü doldurulmuştur. Sona erme noktasını üzerinden puan alan katılımcılar, DEHB ve SAD için DSM-IV kriterlerini gözeten deneyimli psikiyatristler tarafından teşhis amaçlı bir görüşmeye davet edilmiştir. Tüm katılımcıların yüzde 30’u (152/494) tarama ölçeklerindeki sona erme noktası üzerinden bir puan almuş ve bu katılımcıların yüzde 60’ı (92/152) klinik görüşmeye katılmıştır. Klinik görüşmeye katılan katılımcıların yüzde 38’i (35/92) DEHB ve/veya SAB teşhisi almıştır. Tüm örneklem içinde DEHB ve SAB yaygınlık oranı DEHB için 3.23% (16/494) ve SAB için 4.45% (22/494) olarak belirlenmiştir. DEHB ve SAB için DSM-IV kriterlerini gözeten deneyimli psikiyatristler tarafından teşhis almıştır. 0.6% (3/494) katılan katılımcılar, DEHB ve SAB için DSM-IV kriterlerini gözeten deneyimli psikiyatristler tarafından teşhis almıştır. Burada sullan bulgular DEB ve DEHB’nin oldukça yaygın komorbiditeler olduğunu belirtir literatür çalısmaları destekle niteliktedir. Sosyal Anksiyete Bozukluğu olan öğretmen adaylarına teklif edilen profesyonel tarama ve analyze manevi destek verilmesi ise daha fazla artırılmasına gereken bir konudur. Resmi bir teşhis ile etiketlenmekten ve mesleki hayatlarında tedavi görmekte duran korku ve endişenin kültür agréable bir yaklaşıma incelememesi gerekmektedir.

Anahtar Kelimeler: Dikkat Eksikliği Bozukluğu ile Hiperaktivite, Sosyal Fobi, Komorbidite, Yaygınlık

1. INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is a relatively common neuropsychiatric disorder that has an onset in childhood and has been estimated to occur in 3 to 7% of school-aged children around the world (Faraone, Sergeant, Gillberg, & Biederman, 2003). If left untreated, it can cause multidimensional impairment in academic performance, emotional and adaptive functioning and social and family relationships. ADHD is one of the best-studied childhood psychiatric disorders with numerous studies reporting prevalence, phenomenology, etiology and psychiatric comorbidity. However, ADHD in adults has only recently become the focus of widespread clinical attention. Although it was once thought that ADHD does not persist into adulthood, recent research have revealed that ADHD is also prevalent among...
Social anxiety disorder (SAD) is defined as ‘a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or possible scrutiny by others (APA, 1994). SAD often appears early in life, most frequently during adolescence, and usually follows a chronic course characterized by increasing impairment if left untreated. Epidemiological surveys have shown social phobia to be a common disorder characterized by substantial comorbid psychopathology and functional impairment (Furmark, 2002; Ruscio, Brown, Chiu, Sareen, Stein, & Kessler, 2008). The lifetime prevalence of SAD has been reported to range between 3 and 13 percent (Sadock & Sadock, 2007).

Research reporting prevalence of comorbid ADHD and SAD among adult population is limited. In this cross-sectional study we aimed to investigate the prevalence and comorbidity of ADHD and SAD among Turkish university students. The study aims to investigate prevalence and comorbidity of attention-deficit hyperactivity disorder (ADHD) and social anxiety disorder (SAD) in a Turkish community sample of young adult population.

2. METHODS

2.1. Participants and Procedure

Subjects were the third and fourth grade university students attending different departments of the Faculty of Education in Trakya University, Edirne, Turkey. Students were provided with information about the project and consent was sought from those agreed to participate. Participants, who scored above the cut-off marks in the screening measures listed below, were then interviewed by experienced psychiatrists for diagnostic clarification based on DSM-IV criteria for ADHD and SAD.

2.2. Instruments

- Adult ADD/ ADHD DSM IV- Based Diagnostic Screening and Rating Scale:

This scale was originally developed by Turgay A. and then translated into Turkish by the same author (Turgay, 1995). The validity and reliability of the Turkish version of this scale has been reported (Güçlü, Savran, Aksoy, Maner, Turgay, & Yargıç, 2006) and used in several studies (Duran, 2006; Güçlü & Erkıran, 2004). It consists of three subscales with 0-3 Likert type ratings (not true or almost never: 0; very true or very often: 3); attention deficit (AD) subscale with 9 items that investigates DSM-IV attention deficit symptoms; hyperactivity/impulsivity (HI) subscale with 9 items that investigates DSM-IV hyperactivity/impulsivity symptoms; and a third subscale with 30 items that investigates ADD/ ADHD related problems. Subjects who have a score of 11 or above in AD or HI subscales are considered to have significant attention deficit or hyperactivity/impulsivity. Additionally, a score of 13-35 in third subscale shows moderate, while a score of 35-75 shows high levels of problems related to ADD or ADHD. The cutoff points to be included in the present study were a score of 12 or above in each of AD or HI subscales.

- Liebowitz Social Anxiety Scale (LSAS): The Liebowitz Social Anxiety Scale (LSAS) was originally developed as a clinician-administered scale that assesses fear and avoidance in 24 situations that are likely to elicit social anxiety (Liebowitz, 1987). Thirteen of the items enquire about performance situations while the remaining 11 situations assess social interaction situations. For each of the 24 situations, clinicians...
derive ratings of fear and avoidance experienced by the patient using 0-3 Likert-type scales. Six subscales can be derived from the ratings: Fear of Social Interaction, Fear of Performance, Avoidance of Social Interaction, Avoidance of Performance, Total Fear and Total Avoidance. Summing the fear and avoidance ratings for all items derives an overall total score. LSAS has also been adapted to self-report format (LSAS-SR). It has been used in several studies and suggested that LSAS-SR compares well to the clinician-administered version and may be validly employed in the assessment of social anxiety disorder (Baker, Heinrichs, Kim, & Hofmann, 2002; Fresco, Coles, Heimberg, Liebowitz, Hami, Stein, & et al., 2001; Rytwinski, Fresco, Heimberg, Coles, Liebowitz, Cissell, & et al., 2009). An overall score of 55-65 shows moderate social phobia; 65-80 shows marked social phobia; 80-95 shows severe social phobia and a score above 95 shows very severe social phobia. The validity and reliability of the Turkish version of LSAS has been reported (Gençöz, Soykan, & Özgüven, 2003). The cutoff point to be included in the present study was a score of 66 or above (marked social phobia).

Data analysis was conducted with frequency analysis and percentage distribution by using SPSS for windows program version 11.0.

The study was approved by the local ethics committee and university administration and supported with a grant (TUBAP-2008-68) from Trakya University Scientific Research Projects.

3. RESULTS

Of the 494 teacher candidates volunteered to participate in the study, 322 were females (65.18%) and 172 were males (34.82%) with an age range of 21-24 years (22.14 ± 1.32). A total of 152 subjects (30.76%) had a score above of the cutoff points in the screening scales. Thirty subjects (6.07%) had a score of 12 or above in AD / HI subscales of ADD/ADHD Scale and 102 subjects (20.64%) had 66 or above in LSAS whilst 20 participants (4.04%) marked above the cutoff points in both scales. They were considered to meet the screening criteria and were therefore invited for diagnostic interview.

Ninety-two (60.5%) of the 152 subjects invited for diagnostic interview attended and thirty-five (38.04%) of the 92 attendees received diagnoses of ADHD and/or SAD. Sixteen subjects were diagnosed with ADHD, 22 subjects received diagnosis of SAD and 3 subjects had both diagnoses. Prevalence of ADHD and SAD among whole sample (n=494) was 3.23% for ADHD (n=16), 4.45% for SAD (n=22) and 0.6% for comorbid ADHD and SAD (n=3).

Figure 1 below shows the study algorithm and overall prevalence of ADHD and/or SAD.

4. DISCUSSION

Anxiety is known to have a common co-morbidity with ADHD but the research evaluating co-existence of ADHD and Social Phobia has been limited. Safren et al. (2001) reported prevalence of childhood ADHD in adults with Generalized Anxiety Disorder and Social Phobia as 22% and 3%, respectively. In their study of 129 adults, Van Ameringen et al. (2001) noted that the most common comorbid disorders associated with ADHD were major depressive disorder (53.8%), social phobia (38.5%), generalized anxiety disorder (23.1%), and impulse control disorders (30.8%). Similar findings were reported in different studies (Biederman, Faraone, Spencer, Wilens, Norman, Lapey, & et al., 1993; Edel,
Rudel, Hubert, Scheele, Brüne, Juckel, & et al., 2010; Kessler, Adler, Barkley, Biederman, Conners, Demler, & et al., 2006; Mancini, Van Ameringen, Oakman, Figueiredo, 1999).

Koyuncu et al. (2012) studied prevalence of ADHD in 108 subjects who had a primary diagnosis of Social Anxiety Disorder (SAD) and reported that 65 subjects (60.2%) met the diagnostic threshold for ADHD (Koyuncu, Tutkunkardas, Binbay, Özyıldırım, Ertekin, & Tükel, 2012). Whilst 41 participants (37.9%) were reported to have a prior diagnosis of ADHD from childhood, 24 of them (22.2%) had never been diagnosed. It is important to note that majority of the subjects with SAD had the inattentive subtype of ADHD, which supports the account that inattentive ADHD subjects are under-diagnosed. They reported that ADHD subjects with SAD scored higher in fear, avoidance and total subscales in Liebowitz Social Anxiety Scale (LSAS) and concluded that SAD can present in a more severe form in those with comorbid ADHD. The age of onset for SAD, age of the first presentation to clinic, that of the first comorbid major depressive episode and the total duration of formal education that subjects with SAD received were noted to be lower in those with co-morbid ADHD. As expected, chronic depression and other co-morbid psychiatric conditions were more prevalent amongst the comorbid group as compared to those with SAD only.

In their 16-week, randomized, double blind, placebo controlled trial Adler and et al. (2009) evaluated the effect of Atomoxetine on ADHD and social anxiety symptoms in adults with ADHD and comorbid social anxiety disorder. They reported that treatment produced a statistically significant and clinically meaningful improvement on the symptoms of both ADHD and SAD. Geller and et al. (2007) also reported similar findings about the effective treatment of comorbid ADHD and anxiety symptoms in a pediatric population.

Adults with ADHD may exhibit dysfunctional symptoms similar to those identified in young subjects with ADHD (Greydanus, Pratt, & Patel, 2007); however it is well documented (Das, Cherbuin, Butterworth, Anstey, & Easteal, 2012; Rösler, Casas, Konofal, & Buitelaar, 2010; Wilens, Biederman, Faraone, Martelon, Westerberg, & Spencer, 2009) that problems with attention, which manifest as forgetfulness, disorganization, difficulty in planning, task completion and time management is the main symptom group that persists into adulthood. Although it is relatively easy to make a diagnosis of ADHD in young subjects, it may be challenging for many clinicians to reach a diagnosis in adults. Despite the evidence that ADHD can be a burden on the individual and the society; may significantly impair psychosocial functioning and work productivity, it remains to be an under-diagnosed and under-treated condition. Less than one in three adults with ADHD in America get diagnosed, and this ratio is even lower in Europe (Asherson, Akehurst, Kooij, Huss, Beusterien, Sasané, & et al., 2012). In their web-based survey, Able and et al. (2014) reported that only 55% of European respondents received a diagnosis within 6 months of their first physician consultation regarding their ADHD symptoms, compared to 90% in the US. This shortcoming in diagnosing adults with ADHD have been linked to several potential causations including; health care professionals’ lack of awareness of the impact and consequences of ADHD, lack of age-adjusted clinical criteria for addressing the symptoms of ADHD in adults, missing diagnosis of ADHD due to frequent presence of co-morbid conditions, cultural stigma/expectations about the disorder and a poor understanding of the nature of the condition (Asherson, Akehurst, Kooij, Huss, Beusterien, Sasané, & et al., 2012; Kooij, Bejerot, Blackwell, Caci, Casas-Brugué, Carpentier, & et al., 2010 ). Able and et al. (2004) noted that more than half of European respondents (52%) in their survey believed that it took too long to get diagnosed with ADHD, and 40% agreed that their Primary Care Professional seemed hesitant to diagnose ADHD in adults. ADHD itself is associated with cognitive deficits and furthermore, presence of comorbid conditions may hinder help seeking behaviors or complicate clinical picture of adult subjects with ADHD. Although more commonly seen among female adults (Wilens, Biederman, Faraone, Martelon, Westerberg, & Spencer, 2009) with ADHD, social anxiety disorder has been listed to be one of the most common co-morbidities (Kessler, Adler, Barkley, Biederman, Conners, Demler, & et al., 2006). Park and et al. (2011) reported similar findings on the comorbidity without a gender difference in their survey of Korean population.

Findings in our study are grossly in line with the existing research-based figures. Although 152 subjects had agreed to participate in clinical interview, it is important to note that only 92 of them (60.2%) attended. This result can be attributed to the high proportion (80%) of the subjects with symptoms suggestive of a Social Anxiety Disorder in the screening questionnaires. It can be argued that they would likely get a clinical diagnosis of SAD had they attended interviews and possibly that of more severe SAD than those attended the interview. It is also relevant to note that co-existence of anxiety with ADHD can exaggerate reduced stress tolerance, which results in feelings of fear and emotional dysregulation (Sobanski, Bruggemann, Alm, Kern, Deschner, Schubert, & et al., 2007).
A significant proportion of the subjects voiced their reluctance to partake in a clinical interview, worrying that such a label could jeopardize their future career. Being “socially phobic” was not compatible with their perceived attributes of a teacher who should role-model students. Therefore the relatively high levels of drop-out can be attributed to their fear of stigmatization and significant anxiety hindering their help-seeking behavior. Indeed, all subjects diagnosed with SAD declined free treatment offered by the team, despite reassurances provided about confidentiality. The finding that whilst 17 out of 30 subjects (56%) who had passed the screening phase attended clinical interview this rate was as low as 21% (22 out of 102) amongst subjects with social phobia needs to be taken into account in epidemiological studies.

There are a number of potential limitations associated with this study; hence the findings need to be interpreted cautiously. The sample was predominantly female (65% vs 35%), which is not representative of typical ADHD samples, where patients are predominantly male. Besides the small sample size and the subjects being selected from a single center make it difficult to generalize the findings. Drop-out that we attributed to the possible reasons outlined above is likely to have lowered the actual prevalence. Reporting prevalence rates based on diagnoses confirmed by clinical interviews conducted by experienced by psychiatrists is one of the strengths of this study.

Based on the findings in the current study it can be proposed that social phobia and ADHD could be considered for screening among university students, who are at a turning point of their professional lives. Their fear of stigmatization and concerns about receiving a formal diagnosis and treatment need to be addressed and rationalized as the unrecognized and untreated ADHD and Social Anxiety Disorder can be a hinder in pursuing life-time goals and achieving their potential. Finally; transition of the care of young people with ADHD to adult mental health services and the follow-up of adults with childhood onset ADHD needs to be taken more seriously.

5. CONCLUSION

Findings reported here supports the existing data about the topic. Further research studying the prevalence of ADHD and SAD comorbidity among the teacher-candidate university students is particularly needed. The impact of these conditions on the quality of their social and professional lives and their fear of stigmatization, which seems to be seriously hindering their help-seeking behavior needs to be further researched with methodologically stronger studies to fully understand the scope of the problem. Raising awareness about the problem among the university students, staff and administrations; adopting a coordinated approach between mental health services, education system and counseling services at the universities might need to be prioritized to tackle the problem.

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Dikkat Eksikliği ve HiPERAKTİVITE BOZUKLUĞU (DEHB) çocukluğa başlayıp ve dünya genelindeki okul çağındaki çocukların %3-7’inde olduğu tahmin edilen oldukça yaygın bir nöropsikiyatrik bir bozukluktur (Faraone, Sergeant, Gillberg, & Biederman, 2003). Tedavi edilmiş durumlarla, akademik performans, duygusal ve adaptif işlevlerle sosyal ve aile ilişkilerinde çok boyutlu hasarlar oluşturabilir. DEHB yaygın, fenomoloji, nedeni bilimsel olarak pek çok bilimsel çalışmanın konusu olan ve en çok incelenen çocukluk dönemli psikiyatrik bozukluklarından biridir. Bu nedenle, yetişkinlerdeki DEHB sadece son dönemde klinik çalışmaların odak noktası olabilir. Bir dönem konusu olan ve en çok incelenen çocukluk dönemi psikiyatrik bozukluklardan biridir. Buna rağmen, yetişkinlerdeki DEHB sadece son dönemde klinik çalışmaların odak noktası olabilir. DEHB, sosyal bozuklukları ve aile ilişkilerinde etkiliğini göstermektedir (Fayyad, De Graaf, Kessler, Alonso, Angermeyer, Demyttenaere, & et al., 2007; Kessler, 2002). DEHB’nin yetişkinlik döneminde sona erdiği düşünülüb de, ancak bu düşünce, sosyal ve aile ilişkilerinde çok boyutlu hasarlar oluşturabilir. DEHB yaygınlık, fenomoloji, nedeni bilimsel olarak pek çok bilimsel çalışmanın konusu olan ve en çok incelenen çocukluk dönemli psikiyatrik bozukluklardan biridir. Buna rağmen, yetişkinlerdeki DEHB sadece son dönemde klinik çalışmaların odak noktası olabilir. DEHB’nin yetişkinlik döneminde sona erdiği düşünülüb de, ancak bu düşünce, sosyal ve aile ilişkilerinde çok boyutlu hasarlar oluşturabilir.

Amaç: Bu kesitsel araştırmanın amacı Türkiye’deki genç yetişkinlerden oluşan bir örneklemde Dikkat Eksikliği ve HIperaktivite Bozukluğu (DEHB) ile Sosyal Anksiyete Bozukluğunun (SAB) yaygınlığını ve komorbiditesini incelemektir.

UZUN ÖZ

DEHB yaygınlığı ve yaygınlığı üzerine yapılan araştırmalar sınırlıdır.

Amaç: Bu kesitsel araştırmanın amacı Türkiye’deki genç yetişkinlerden oluşan bir örneklemde Dikkat Eksikliği ve HIperaktivite Bozukluğu (DEHB) ile Sosyal Anksiyete Bozukluğunun (SAB) yaygınlığını ve komorbiditesini incelemektir.


Sonuçlar: Tüm katılımcıların yüzde 30’u (152/494) tarama ölçeklerindeki sona erme noktası üzerinde bir puan almış ve bu katılımcıların yüzde 60’ı (92/152) klinik görüşmeye alınmıştır. Klinik görüşmeye alınan katılımcıların yüzde 38’i (35/92) DEHB ve/veya SAB teşhisi almıştır. Tüm örneklem içinde DEHB ve SAB yaygınlık oranı DEHB için 3.23% (16/494) ve SAB için 4.45% (22/494) olarak belirlenmiştir. Katılımcıların 0.6% (3/494)’ünün komorbid DEHB ve SAB’ına sahip olduğu saptanmıştır. Burada sunulan bulgular SAB ve DEHB’nin oldukça yaygın komorbiditeler olduğunu belirtir literatür çalışmalarını destekler niteliktedir. Sosyal Anksiyete Bozukluğu olan öğretmen adaylarına teklif edilen profesyonel yardımın reddedilmesi ise daha fazla araştırılması gereken bir konudur. Resmi bir teşhis ile etiketlenmekte ve mesleki hayatlarında tedavi görülen durum korku ve endişenin kültüre özgü bir yaklaşımla incelenmesi gerekmektedir.