

Untreated and Under-treated Selective Mutism and Early Childhood Anxiety as Gateways to Subsequent Mental Health Problems

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Many mental health professionals regard untreated or under-treated SM and anxiety in early childhood as a "gateway" to worsening anxiety, mood, and other mental health problems over time. There is considerable evidence that SM and other anxiety problems that don't get early, effective help confer significantly increased risk for later problems that actually are worse, not just a continuation of the same problems. This would be things such as additional anxiety disorders, perhaps then getting demoralized about the possibility of getting better, which could lead to mood problems and depression. Anxiety and mood in adolescence and early adulthood are also associated with increased substance use and substance problems.

Is it technically possible that if you don't treat early SM it will go away? Technically, yes, it is possible. Anecdotally though, the only time I have ever seen anything like this occur was when the mother of the young child with SM was actually doing lots of interventions on her own that the child responded to. For example, she had the school bus driver come over during the summer to casually meet the kids in the family. It would be unfair to all this parent did to say the child "spontaneously remitted." Interestingly, these were twins, both with SM, and while one twin remitted, the other did not and then required active treatment.

Based on research and anecdotal clinical wisdom, the odds are clearly that SM and early childhood anxiety won't go away on their own. One way to think about this is that every day a child with SM has the symptoms is a negative day for them, in that there are so many things that they avoid each day: sharing ideas, asking for help, being assertive, contributing in class discussions, etc. This daily, accumulated avoidance chips away at one's self-efficacy – the prediction that you *can* do something, such as "brave talk." The continued avoidance may also chip away at one's self-esteem – our evaluation of how we feel we are doing in the world.

Early and potent-enough intervention are key. The Selective Mutism Association – the largest non-profit SM advocacy group - encourages parents and other consumers to be good detectives, vetting programs to see if they have empirical or research support to back them up. The SMA annual conference gives professionals a chance to share their findings with other professionals and also to share their findings with the public.

Here is a compiled, annotated list of nine peer-reviewed journal articles that address the issues of untreated and under-treated SM as a "gateway" disorder to worsening problems from several perspectives.

Bergman, R. L., Piacentini, J., & McCracken, J. T. (2002). Prevalence and description of selective mutism in a school-based sample. Journal of the American Academy of Child & Adolescent Psychiatry, 41(8), 938-946. A participation rate of 94% (125 of 133 teachers) was obtained, and the prevalence of SM was

.71% (16/2,256). Measures were completed for 12 (75%) of 16 identified children. Compared with peers, children with SM were more symptomatic on measures of frequency of speech, social anxiety, and other internalizing symptoms. As a group, children with SM had improved 6 months later but remained impaired and symptomatic when compared with the comparison group.

Buckner, J. D., Schmidt, N. B., Lang, A. R., Small, J. W., Schlauch, R. C., & Lewinsohn, P. M. (2008). Specificity of social anxiety disorder as a risk factor for alcohol and cannabis dependence. Journal of psychiatric research, 42(3), 230-239. Social anxiety disorder (SAD) is highly comorbid with alcohol use disorders (AUDs) and cannabis dependence. However, the temporal sequencing of these disorders has not been extensively studied to determine whether SAD serves as a specific risk factor for problematic substance use. The present study examined these relationships after controlling for theoreticallyrelevant variables (e.g., gender, other Axis I pathology) in a longitudinal cohort over approximately 14 years. The sample was drawn from participants in the Oregon Adolescent Depression Project. After excluding those with substance use disorders at baseline, SAD at study entry was associated with 6.5 greater odds of cannabis dependence (but not abuse) and 4.5 greater odds of alcohol dependence (but not abuse) at follow-up after controlling for relevant variables (e.g., gender, depression, conduct disorder). The relationship between SAD and alcohol and cannabis dependence remained even after controlling for other anxiety disorders. Other anxiety disorders and mood disorders were not associated with subsequent cannabis or alcohol use disorder after controlling for relevant variables. Among the internalizing disorders, SAD appears to serve as a unique risk factor for the subsequent onset of cannabis and alcohol dependence.

Dummit III, E. S., Klein, R. G., Asche, B., Martin, J., & Tancer, N. K. (1996). Fluoxetine treatment of children with selective mutism: an open trial. Journal of the American Academy of Child & Adolescent Psychiatry, 35(5), 615-621. All 21 children met DSM-III-R and DSM-IV criteria for anxiety disorders. After fluoxetine treatment, 76% were improved, with diminished anxiety and increased speech in public settings, including school. Improvement at week 9 was inversely correlated with age; the older children did not have as robust a medication response as did the younger children.

Foley, D. L., Goldston, D. B., Costello, E. J., & Angold, A. (2006). Proximal psychiatric risk factors for suicidality in youth: the Great Smoky Mountains Study. Archives of general psychiatry, 63(9), 1017-1024. The severity of symptom-related impairment and total symptom load explained most of the risk for suicidality associated with current psychiatric disorders. Only depression plus GAD discriminated atrisk youth independent of severity of psychopathology.

Greenberg, P. E., Sisitsky, T., Kessler, R. C., Finkelstein, S. N., Berndt, E. R., Davidson, J. R. T., . . . Fyer, A. J. (1999). The economic burden of anxiety disorders in the 1990s. The Journal of Clinical Psychiatry, 60(7), 427-435. This study assessed the annual economic burden of anxiety disorders in the United States from a societal perspective. Using data from the National Comorbidity Study with Ss aged 15-54, the costs associated with anxiety disorders were calculated, after adjusting for demographic characteristics and the presence of comorbid psychiatric conditions. Based on additional data, a human capital model of the societal cost of anxiety disorders was estimated. The annual cost of anxiety disorders was estimated to be approximately \$42.3 billion in 1990, or \$1542 per sufferer. This comprised 54% of the total cost in nonpsychiatric medical treatment costs, 31% in psychiatric treatment costs, 10% in indirect workplace costs, 3% in mortality costs, and 2% in prescription pharmaceutical costs. 88% of workplace costs was attributable to lost productivity while at work as opposed to absenteeism. posttraumatic stress disorder (PTSD) and panic disorder were the anxiety disorders found to have the highest rates of service use. Other than simple phobia, all anxiety disorders were associated with impairment in workplace performance. It was concluded that anxiety disorders impose a substantial cost on society, much of which may be avoidable with awareness, recognition, and intervention.

Keeton CP, Caporino NE, Kendall PC, et al. Mood and suicidality outcomes 3–11 years following pediatric anxiety disorder treatment. Depress Anxiety. *In press*. 2019;0–0.

https://doi.org/10.1002/da.22944 Dr. Keeton, the first author, provided this summary of their article that is currently *in press:* The authors looked at treatment response in the largest and longest child anxiety treatment trial ever conducted (CAMS) as a predictor of subsequent mood disorders, depression symptoms, suicidal ideation and suicidal behavior 6 years after treatment. Treatment outcome did not predict whether or not someone later developed a mood disorder or suicidal thinking, but a positive treatment outcome did predict absence of suicidal behavior and trajectory of low depressive symptoms (consistent low symptoms over 7 data points). There was no ability in this study to compare outcomes to a sample of untreated youth.

Pine, D. S., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. Archives of general psychiatry, 55(1), 56-64. Results were that adolescent anxiety or depressive disorders predicted an approximate 2- to 3-fold increased risk for adulthood anxiety or depressive disorders. Results from the analyses using latent variables suggested that while most adolescent disorders were no longer present in young adulthood, most adult disorders were preceded by adolescent disorders. The authors concluded that an anxiety or depressive disorder during adolescence confers a strong risk for recurrent anxiety or depressive disorders during early adulthood. Most anxiety and depressive disorders in young adults may be preceded by anxiety or depression in adolescence.

Rohde, P., Lewinsohn, P. M., & Seeley, J. R. (1996). Psychiatric comorbidity with problematic alcohol use in high school students. Journal of the American Academy of Child & Adolescent Psychiatry, 35(1), 101-109. The lifetime occurrence of psychiatric disorders was examined in a community sample of 1,507 older adolescents (aged 14 through 18 years) who were categorized according to their alcohol use (i.e., abstainers, experimenters, social drinkers, problem drinkers, and abuse/dependence group). Increased alcohol use was associated with the increased lifetime occurrence of depressive disorders, disruptive behavior disorders, drug use disorders, and daily tobacco use. There was a trend for increased alcohol use in girls to be associated with anxiety disorders. More than 80% of adolescents with alcohol abuse/dependence had some other form of psychopathology. Alcohol disorders, in general, followed rather than preceded the onset of other psychiatric disorders. Comorbidity was associated with an earlier age of alcohol disorder onset and with greater likelihood of mental health treatment utilization.

Silk, J. S., Price, R. B., Rosen, D., Ryan, N. D., Forbes, E. E., Siegle, G. J., ... & Ladouceur, C. D. (2019). A longitudinal follow-up study examining adolescent depressive symptoms as a function of prior anxiety treatment. Journal of the American Academy of Child & Adolescent Psychiatry, 58(3), 359-367. Participants were 80 adolescents ages 11 to 17 years who had previously completed a randomized trial comparing predictors of treatment response to CBT and a child-centered therapy (CCT). Youth met DSM-IV criteria for generalized, separation, and/or social anxiety disorder at the time of treatment. The present study was a prospective naturalistic 2-year follow-up examining trajectories toward depression, in which participants were reassessed for depressive symptoms 2 years after anxiety treatment. Treatment response was defined as a 35% reduction in independent evaluator-rated anxiety severity on the Pediatric Anxiety Rating Scale after treatment. As hypothesized, lower levels of depressive symptoms were observed in anxious youth who responded to CBT for anxiety ($\beta = -0.807$, $\rho = .004$) but not CCT ($\beta = 0.254$, $\rho = .505$). Sensitivity analyses showed that the effects were driven by girls. Findings suggest that CBT for anxiety is a promising approach to preventing adolescent depressive symptomatology, especially among girls. The results highlight the need for better early screening for anxiety and better dissemination of CBT programs targeting anxiety in youth.