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Depression in Low-Income Adolescents: Guidelines for School-Based Depression Intervention Programs

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Abstract

It is estimated that 2.6 million adolescents suffer from major depressive episodes each year. Research has noted that symptoms in youth have become indicators of mental health complications later in life. Studies reveal that low income is a risk factor for depression and that socioeconomically-disadvantaged teenagers are more than twice as likely to develop mental illnesses. Only roughly 25% of children with mental illnesses receive adequate help and 80% of these resources come from schools. This study focuses on establishing the importance of depression intervention programs in low-income high schools and on designing novel guidelines for effective protocols. A compilation of expert opinion on depression screening, education, and treatment, as well as analysis of previously implemented school screening and/or awareness programs, was examined in order to understand key strategies. This study found that a multi-layered approach that includes screening, universal education, and high-risk intervention is most effective in addressing mental health needs of low-income adolescents. To ensure feasibility and efficacy, screening should be conducted with a modified PHQ-a test and followed-up with timely clinical interviews by school psychologists. All students should receive universal depression education curriculum consisting of principles like depression literacy, asset theory, and promotion of help-seeking behaviors. Extending universal education to teachers would also be beneficial in promoting mental health communication and positive classroom environments. It is vital that students screened positively for depression or suicidality then receive high-risk protocols, ranging from group Cognitive-Behavioral Therapy to facilitated mental health center referrals based on individual severity. Effectively addressing depression in school systems requires integration of mental health promotion, depression prevention, and psychotherapy. By taking a multidimensional approach addressing all three aspects, public health officials and school administrations can ensure that adequate resources are being directed to those most in need.

Keywords: Depression, Socioeconomically Disadvantaged, Adolescence

1. Introduction

As the emphasis on mental health grows in the United States, more research is being conducted on the prevalence and impact of depression in the general population. Depression is set to be the 2nd most disabling condition by 2020 and is currently the #1 psychological disorder in the United States[13]. Depressive disorders come in many forms. Major Depression is the most well-known and is characterized by an episode of severe depressive symptoms such as fatigue or feelings of hopelessness that interferes with daily life. While Major Depression may be limited to just one episode, it usually resurfaces throughout a patient's life. Persistent Depressive Disorder consists of a depressed mood for over 2 years and may occur alongside Major Depression. Other forms of depression include psychotic depression, post-partum depression, Seasonal Affective Disorder (SAD), and bipolar-depression. The clinical severity of depression can be measured using patient rating scales such as the PHQ-2, which uses a 1-5 ranking[10]. Thus, depressive symptoms

are evaluated on a spectrum – while a patient may not necessarily have symptoms severe enough for Major Depression, he or she may still benefit from psychotherapy and increased awareness of mental health resources.

According to the National Alliance on Mental Illness, an estimated 16 million American adults have had at least 1 major depressive episode in the last year[4]. The Depression Center at the University of Michigan Health System noted that the economic burden of depression is $83 billion in the United States and that depression significantly impacts aspects of society such as workplace productivity and interpersonal relationships with family and acquaintances. Due to its significant impact on Western society, clinicians are pushing to develop long-term solutions that combine both psychological therapy and biological treatments. Likewise, activist groups and healthcare systems are fighting the still prevalent stigma against depression and helping establish mental health as a leading public health matter.

Adolescents and low-income populations are at an increased risk of suffering from depression, a condition that interferes with educational attainment and socio-behavioral functioning – depression intervention programs should be implemented in low-income high schools in the US as a means to provide mental health services to those most in need. As a public health matter, depression needs to be addressed at different levels - specific protocols consisting of depression screening, universal depression and mental health education, and high-risk follow-up intervention are recommended in order to provide adequate resources to those most in need.

2. Increased Risk of Depression in Adolescents and Low-Income Populations

Adolescent depression has rapidly grown in interest to clinicians and researchers in psychology. According to Ruble, Leon, Gilley-Hensley, Hess, & Swartz,

> "In 2007, there were an estimated two million adolescents aged 12–17 who suffered from a major depressive episode in the last year. Of those, approximately half had a major depressive episode which caused severe impairment in one or more role domains, including chores at home, school or work responsibilities, close relationships, and social life (SAMHSA Office of Applied Studies, 2008)"[11].

The large number of adolescents affected by depression currently is concerning considering that the incidence rate for Major Depression has also been increasing. Given depression's impact on socio-behavioral functioning and its close ties with disorders such as substance abuse and suicide, schools and communities face effects such as decreased scholastic performance and an increase in high-risk behaviors. Furthermore, mental health disorders that have roots in adolescence often continue throughout adulthood despite initial recovery. Those at increased risk of depression stay at risk for the remainder of their lives[12]. In regards to the need to educate adolescents about depression, only 42% of students in a given study could accurately identify depression as a mental illness and most are overconfident of their abilities to address depression using methods that have not proven to be effective[11]. Adolescent depression remains difficult to address due to the unwillingness of youth to seek help and reach out to trustworthy adults regarding resources. A dearth of knowledge on depression itself is a barrier to establishing proper communication regarding the disease and contributes to the high morbidity rate in this population.

Research confirms that socioeconomic status also affects depression rates in a community. Urban Latino and African-American youth populations, who often grow up in disadvantaged neighborhoods, are at a heightened risk for mental illnesses and socio-behavioral complications due to a strenuous upbringing[1]. This idea is supported by Lerner, who demonstrated that teens from low-income backgrounds are more than twice as likely to develop complications with mental health[8]. Youth with strong ties to family and community have been shown to be less likely to develop mental health complications and more likely to achieve academically. However, in low-income populations, adolescents are often faced with stressors such as a disrupted home environment, significant financial need (and thus, less access to specialized resources), and community stigma toward mental health interventions. Low-income youth are also more prone to feelings of chronic stress and isolation, which makes addressing psychological concerns with family or other trusted caregivers more difficult. A study by Goodman, Slap, and Huang solidified the connection between socioeconomic status and depression levels in adolescents – Goodman, Slap, and Huang demonstrated that Population Attributable Risk for socioeconomic status on depression is 26% for income and 40% for parental income[6]. The high AR_e values indicate that had all populations studied been of equal socioeconomic status, the health disparities would be greatly reduced. The concept that low-income or low-education levels alone increase the risk of depression in vulnerable populations highlight the importance of addressing factors that are associated with low income and understanding the inherent population-attributed risks that certain groups of students face.

3. Empirical and Theoretical Evidence for School-Based Depression Intervention

Adolescents with depression and associated mental health conditions are often not receiving the assistance that they need. While community mental health organizations exist in inner-cities, they are often not integrated effectively with the community and youth miss out on key clinical opportunities for recovery[1]. The concept of those with mental illnesses not being able to access adequate resources is supported by Husky, Sheridan, Mcguire, & Olfson, who demonstrated that less than a third of those with suicidal ideation have received mental health services in the past year[7]. Less than 25% of those children who need mental health help receive proper care for their conditions[8]. In order to successfully reduce psychologically-driven disparities in the classroom and health disparities in the community, adolescents' mental health concerns must be addressed within appropriate boundaries of their familial and socioeconomic circumstances. Even despite the presence of resources in some communities, low income families face problems with accessibility – many do not have time or financial liberty for intensive clinical care outside of school and work, which perpetuates the cycle of susceptibility for depression.

Screening protocols, which allow for identification of depression, may be the first step in providing resources to those who need it the most. The United States Preventative Services Task Force, which provides national guidelines on public health matters, released a statement recommending the screening of adolescents and children in the context of primary care facilities and is currently updating its recommendations[16]. However, while 90% of pediatricians feel responsible for depression identification, only 0.2% of clinical visits involved depression screening[8]. Students have been found to be reluctant to voluntarily disclose information regarding "emotional distress" and that parents are unware of their children's' mental health complications to a "considerable extent"[7]. Essentially, adolescents in low-income environments who are most vulnerable to depression are also the ones who are not able to access resources provided by conventional sources. Most low-income adolescents do not have a home environment that is conducive to open discussion regarding mental health and thus do not take the initiative to reach out to community wellness centers. While research has noted the importance of clinical screening for depression in adolescents, financial burdens regarding healthcare insurance and costs of follow-up care remain barriers to accessing primary care resources. Even for those with access to primary care physicians, the aforementioned lack of screening from the pediatricians' side, as well as use of a general protocol that is not specific to the needs of socioeconomically-disadvantaged patients hinders access to proper care.

In his keynote speech to the PARTNERSHIPS FOR THE NEXT CENTURY: Spring 2014 Semiannual Meeting hosted by the California Department of Public Health regarding school mental health interventions, Lerner asserted that of children who receive help, 80% receive it through school-based mental health services[8]. A review of past literature highlights that schools may be the most apt place for depression prevention and intervention[14]. Atkins also lends credence to Lerner and Silverstone's claims regarding schools as opportunities to address adolescent mental health (depression in particular) but also notes that schools were not created to handle such responsibilities[2]. However, given the need for mental health services in low-income communities and the fact that schools play a critical role in an adolescent's socio-behavioral development, school-based depression services are an effective way to provide care to a very vulnerable population. As the environment in which they develop many of their behaviors and attitudes that persist into adulthood, it is imperative that schools encourage a positive environment regarding depression treatment and mental health awareness. Furthermore, classroom attendance and academic success is often very dependent on the mental health and positive psychological functioning of students, so schools have incentives to provide adequate resources to those in need. Perhaps most critically, schools are much more accessible and integrated with an adolescent's daily life than either primary care or community mental health centers in low-income communities.

Mental health is very much a public health matter. Poor mental health, which sets in much earlier in life than most conditions, increases the risk of comorbid conditions such as obesity and heart disease, which are already elevated in low-income populations. Given that depression is just as much psychosocial as it is biological, community-based strategies encapsulating everything from prevention to treatment should be considered. In his lecture as part of the Evidence-Based Practice in Mental Health Services series at the Leonard Davis Institute, Atkins referenced the 2009 H1N1 virus campaign, one of the most successful public health campaigns recently launched. The campaign consisted of two key principles – give initial resources including vaccines to those in immediate need and get the rest of the general public involved by launching a campaign centered around hygienic practices such as hand-washing and sneezing into the elbow[2]. A similar approach can be taken in schools for depression intervention campaigns. Quickly providing resources to those most affected and still involving everyone via an educational campaign allows for a widespread long-term response in terms of eradicating disease and eliminating stigma. Public health lies on a continuum; reducing depression rates and stigma in low-income adolescents requires more than just antidepressants –

it requires health awareness, preventative efforts, changes in public opinion, and follow-up treatment. Multiple studies have established the value of multi-layer interventions. In a clinical setting, the importance of providing multidisciplinary, staff-assisted follow-up care services and psychotherapy treatment for those screened positively was emphasized[16, 17]. This is supported by the fact that primary-care programs that simply screen for depression are unlikely to affect depression outcomes, but those that integrate follow-up education with screening can decrease depression rates[16]. Low-income school settings with school psychologists reflect similar environments as primary-care programs and can apply many of the same strategies.

In regards to schools, Silverstone et al.'s EMPATHY study and Lerner's PBIS study involved placing students in low, medium, and high-risk categories and providing appropriate resources (i.e. mental health center referrals, school psychologist counseling, etc) as in primary care[14, 8]. The importance of intervening at different levels – the STEP-UP mental health campaign aims to address urban adolescent mental health in youth, family, and school/community settings – was also emphasized. It was asserted that understanding the needs of the population are essential in creating an effective program[1].

The concept of a multi-layered depression intervention program targeted toward low-income adolescents has yet to be implemented. Many of the aforementioned studies have had successful outcomes in reducing depression rates, increasing depression literacy, and referring students to outside resources, but few have combined all three elements. For example, Husky et al. and Silverstone et al. both addressed screening and follow-up protocols while Ruble et al. discussed depression education[7, 14, 11]. While each of these studies addresses parts of depression, an effective intervention program integrates many of the individual strategies mentioned in previous studies and spans screening, education, and high-risk intervention all at once. Moreover, a program has yet to be geared specifically to the unique needs and school environment of low-income students. The following guidelines are a step towards creating effective program protocols that provide the most service to those most in need of depression and mental health resources.

4. Initial Screening Protocols

Screening protocols should be geared toward the needs of the target population receiving screening[1, 2]. Different screening tools including the Zung Self-Depression Scale, Beck Depression Inventory and General Health Questionnaire, which can all be administered in under 5 minutes, have been shown to have good sensitivity and fair specificity. The USPSTF also established that shorter tests that address mood and anhedonia have been effective in detecting depressed patients. The USPSTF formally states that there is limited evidence to empirically suggest one screening test over another and that factors such as patient population and suitability for the screening setting should be considered[12]. Screening tool such as the MH E-Screening, PHQ-9 for Adolescents are suitable options for those ranging from 12-21 years old[8]. In establishing what screening test to use, the accessibility, efficacy, rapidity of administration, and cost-effectiveness are key principles to consider when conducting screening tests on large groups of students in low-income environments with limited extra resources. Additionally, since the screening programs would be implemented in a school environment and not in a formal primary care setting, efforts to reflect clinical diagnostic standards should be made to ensure accuracy in screening results. Given these vital components, it is interesting to note the potential of the PHQ-a test, which is the Patient Health Questionnaire-9 modified for Adolescents. The PHQ-9, which is widely used for adults, draws its questions directly from the clinical guidelines outlined by the Diagnostic and Statistical Manual of Mental Disorders-5 – the PHQ-a simply has modifications in wording and scaling to suit adolescents.

In regards to the efficacy of the PHQ-a, at a cut-off score of 11 (slightly higher score for adolescents than for adults), the test had sensitivity in 89.5% and specificity in 77.5% of youth diagnosed with major depression. Richardson et al. emphasized that screening tools should be brief, accurate, easy to understand and without cost, all of which the PHQ-a provides[10]. The EMPATHY mental health screening program used the PHQ-A as well, but with a modification to include two questions regarding suicidal ideation. Silverstone et al. rationalized that if intervention is based simply on the PHQ-a depression score, those who are actively suicidal may be missed despite needing mental health resources[14]. Given the strong correlation between major depression rates and suicidal ideation, a similar approach for screening low-income high school students should be taken. By using the PHQ-a with a modification to address suicidality, students will be screened with a test based in clinical diagnosis criteria and the concern of missing those who are suicidal but asymptomatic of depression is eliminated.

Beyond the screening tool used, planning how screening will be implemented, information will be disseminated, and follow-up protocols will be established is essential. While Lerner focused on the immediate transition to primary care for just those screening positively for depression instead of also incorporating universal education, he makes valid

points regarding understanding cultural issues, literacy, privacy and the right to opt out before screening is conducted[8]. His points are supported by Atkins and Alicea, Pardo, Conover, Gopalan, & Mckay, who asserted that understanding the cultural needs of the community before implementing a program is vital[1, 2]. Husky et al. noted that the screenings took place in health classrooms[7]. Providing students and caretakers with clear information regarding the reasoning behind and logistics of the screening and follow-up services, as well as the full promise of confidentiality and ability to back out anytime, allows for program coordinators to start breaking down the stigma regarding mental help in low-income communities. Both Husky et al. and Silverstone et al. allude to conducting clinical interviews following screening – while Husky et al.'s study provided it for anyone screening positively for depression, Silverstone et al.'s study provided for students deemed to be in high- and medium-suicide risk groups following screening[7, 14]. Both Silverstone et al. and Lerner emphasize the importance of rapid feedback[8, 14]. Silverstone et al.'s EMPATHY program ensured that those who were at highest risk for suicide were able to receive interviews within 48 hours and feedback from students, caretakers, and staff was rapidly integrated into the program[14]. Likewise, Lerner noted that the PBIS program allowed for implementation of behavioral systems that incorporated rapid intervention for students considered Tier 2 and Tier 3 (medium and high risk, respectively)[8]. Rapid feedback and interviews are critical because they indicate to students and caretakers that the program administrators take student mental health screenings seriously and can provide immediate assistance. Integrating rapid screening results also allows for program administrators to effectively modify a program around the psychological and social needs of the target population based on student feedback in post-screen interviews.

Silverstone et al. also highlighted that those who administered the tests and ran the bulk of the program were not necessarily highly-trained specialists, but rather school personnel such as psychologists and teachers[14]. Allowing for school staff to run the majority of the screening and interviews (with additional trained overseers) allows for students to start building valuable trust with adults that they can go to for resources. Doing so builds stronger connections within the school community regarding mental health and assists with promoting positive communication between teachers and students regarding academic achievement.

5. Establishing Universal Mental Health Education

Research suggests that depression screening is not necessarily effective by itself and needs to be coupled with education for at least moderate results. Universal education, regardless of screening outcome, for all students involved in a depression-intervention program is key. Silverstone et al. and Lerner both highlighted use of universal education for all groups (low to high risk) as part of their mental health intervention programs[8, 14]. Adolescents lack proper depression literacy and the knowledge of how to address mental health in peers and seek help[11]. Providing universal education – that is, depression and mental health education for all program participants, regardless of screening outcome – is critical as it affects the school environment and introduces students to help-seeking behaviors. By educating all participants on depression literacy, understanding of mental health, and how to access resources, students are informed about depression and are more likely to display sensitivity to peers' mental health concerns and wellbeing. By facilitating discussion about mental health in a safe space such as a classroom, school staff are able to foster a positive school climate, which is essential for academic and psychosocial success in low-income schools. Furthermore, simply screening students and providing no follow-up services to those who did not screen positively for depression limits mental health education to a very small portion of the overall population and leads to minimal positive change. The Adolescent Depression Awareness Program is a 3-hour curriculum with pre- and post-tests (separated by 6-8 weeks) that addresses these concerns by teaching students about depression, diagnosis, suicidal ideation, and help-seeking. It is taught by medical students and psychiatry residents using different teaching modalities, including group activities and videos, and has been shown to be effective in increasing depression awareness and decreasing stigma regarding receiving support[11]. A curriculum similar to ADAP would be ideal for implementation as part of high-school depression intervention programs as it addresses the aforementioned depression literacy and can be tracked for effectiveness using the pre-and post-tests. In particular, the use of medical students and residents allows for school systems to start building strong connections with community mental health resources and for students to be able to interact with medical professionals regarding concerns without worrying about clinical costs.

Several key programs used by STEP-UP, an urban mental-health campaign, can be paralleled in depression intervention campaigns. In particular, Alicea highlights Social-Action Theory (SAT), which focuses on aspects such as mental health empowerment and social capital, as well as asset theory, which focuses on improving mental health functioning, educational and financial goal-setting, and behavioral change. Both were implemented by STEP-UP to focus on empowering inner-city youth from under-resourced communities in regards to psychosocial functioning[1].

The strategies utilized with the inner-city populations can be paralleled in low-income adolescent depression intervention programs. Students who are not otherwise exposed to many self-help resources are able to utilize principles from SAT and asset theory to develop positive psychosocial behavior and planning skills, as well as disengage with harmful behaviors that arise from their environment. Introducing SAT and asset theory into depression intervention programs allows for students with limited financial resources to learn long-term principles of empowerment and educational achievement alongside positive mental health strategies and depression education.

Teachers also have a vital role in determining the school environment and mental health of students. Lerner suggested that teachers should be educated regarded empirically-supported teaching methods that acknowledge positive behavior and create an effective, healthy learning environment in the classroom. Teachers and school administrators should be educated on early warning signs of mental illness and how to properly communicate with students and caretakers regarding such concerns[8]. Depression screening typically focuses exclusively on the students, but introducing universal education for teachers as well is key since school staff has a large influence school culture. Esecially poor high schools, scholastic success is dependent on mental health success - teachers who are well-versed in addressing depression and associated mental illnesses are able to better empathize with the needs of vulnerable students and work individually with them to address psychological and academic concerns. This idea is supported by Atkins, who detailed the concept of Teacher Education Days as a part of his mental health campaign in which urban teachers are taught specific teaching strategies and provided with information about mental health resources to access in the classroom. Atkins noted that, based on the 3-Year Follow-Up Strategy, when given adequate resources, teachers were willing to follow through with suggested practices[2]. Atkins' study emphasizes that educating teachers is one way to feasibly influence the classroom atmosphere in the long-term and strengthen student-teacher relationships.

6. High-Risk Intervention and Follow-up

In order to give resources to those who need them the most, depression intervention programs should have follow-up protocols for students at high-risk of depression or suicide. Both the EMPATHY program and the PBIS Study established multi-tier categories for students following screening, in which the high-risk and moderate-risk students were given additional resources and appropriate follow-up referral[8, 14]. This paralleled the USPSTF recommendation for multidisciplinary interventions that involve staff-assisted care systems[12]. Taking a multi-tier approach parallels the concept of "triaging" in trauma situations – with limited resources available, classifying students based on severity of condition and assigning resources appropriately ensures that each group gets adequate care relative to their need. Silverstone et al. determined the highest risk category as those who had the top 10% of EMPATHY scores or showed suicidal ideation – they were given immediate clinical interviews and internet-based guided Cognitive-Behavioral Therapy (no mention of outside referrals, but students did work with Resiliency Coaches). While not as intensive as for the high-risk group, the moderate-risk group was given CBT as well and the low-risk students were given the optional CBT curriculum as a supplement to the universal program. Silverstone found that implementation of this program resulted in statistically significant reductions in depression, anxiety, and suicidality scores[14]. A study by Spirito, Esposito-Smythers, Wolff, & Uhl questions CBT's ability to reduce suicidality, but does assert that CBT strategies like Rational Emotive Therapy (teaches cognitive restructuring) and the ABCDE method (teaches about dealing with negative beliefs or thoughts) have been empirically supported to be effective depression treatments[15]. The PBIS study used a Multi-Tiered System of Support Model, in which Tier 2 students were given group support and intervention and Tier 3 students were given further individualized screening and Person Centered Planning. Implementation of the PBIS program lead to improvements in socio-behavioral functioning and reduced discipline referrals[8]. High-risk interventions provide the critical connection between vulnerable low-income students and resources available at community mental health centers and hospitals. Husky et al. provided those who asked for help or had high depression screening/suicidal ideation scores for a second-stage clinical interview and referral to either school or community mental health services[7]. It was noted that the STEP-UP urban mental health campaign also introduces one-on-one mentoring and group facilitation of crisis plans for those who expressed the most need[1]. Those with milder cases were more likely to be referred to school-based services while those with suicidal ideation and very high-risk were referred to community mental health services. A similar strategy is recommended for depression intervention programs[7]. Students who need highly-specialized attention or are in a critical condition (i.e. suicidality) are able to get care from professionals with specific mental health training and tools. At the same time, keeping cost-effectiveness in mind, students with less severe depression are able to receive adequate care from school psychologists, further strengthening the student-adult relationships within the school system. Alicea et al. also introduced the idea of

in-home visits with caretakers (since accessibility is a hindrance in urban communities) to involve parents in creating a healthy home environment and facilitating parent-child relationships, which is critical in low-income families[1].

In regards to specific treatments, the USPSTF issued a warning about the use of Selective Serotonin Reuptake Inhibitors (SSRIs) and antidepressants in the treatment of depression in the adolescent and older adolescent age groups. The USPSTF formally recommended that clinicians look at psychotherapy and other non-medication based treatments as use of SSRIs has been correlated with increased risk of suicidal behavior in adolescents[16]. In addition to being a financial burden that low-income families cannot afford, parents have demonstrated concerns regarding unnecessary access to prescription-drug abuse following screening. The proposed depression intervention program does in fact focus on psychotherapy as a treatment method but also ensures that students with severe needs are being linked to specialized mental health centers that can handle pharmaceutical treatment appropriately.

7. Conclusions and Further Considerations

This paper established overarching guidelines and recommendations for comprehensive depression interventions in low-income high schools; however, it is imperative that further research be conducted before a program is fully enacted. Aspects to be researched further include the mental health funding of low-income schools and the level of training that school psychologists receive. Additionally, factors such as differences in rural and urban low-income communities and the receptiveness of their respective external mental health centers should be considered. Strategies for increased engagement with parents or caretakers, as well as financially-feasible community-wide elimination of stigma, are important aspects to consider as well.

Understanding the unique psychosocial needs of a community is critical in public health and psychology. Adolescents from low-income communities need advocates who understand the unique financial and environmental constraints that they are put under. Eliminating depression in impoverished families is not simply a matter of providing another wellness center or pharmaceutical dispensary to the community. Effective mental health change requires a combination of identification of disease, education and public awareness, and rapid treatment for those who need critical resources. Developing such a system in a school environment allows for students to easily integrate change into their daily lives and create positive conversation about mental health before entering adulthood.

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9. References

1. Alicea, S., Pardo, G., Conover, K., Gopalan, G., & Mckay, M. (2011). Step-Up: Promoting youth mental health and development in inner-city high schools. *Clinical Social Work Journal, 40*(2), 175-186. doi:10.1007/s10615-011-0344-3

2. Atkins, M. (2012, October 1). New models for mental health promotion in high poverty communities: Drilling deeper in urban schools. Lecture presented at Evidence-Based Practice in Mental Health Services Research Seminars in University of Pennsylvania, Philadelphia. Retrieved from http://ldihealtheconomist.com/

3. Bradshaw, C., Waasdorp, T., & Leaf, P. (2012). Effects of school-wide positive behavioral interventions and supports on child behavior problems. *Pediatrics, 130*(5), 1136-1145. doi:10.1542/peds.2012-0243

4. Depression. (n.d.). Retrieved December 10, 2015, from https://www.nami.org/Learn-More/Mental-Health-Conditions/Depression

5. Depression and Lost Productivity. (n.d.). Retrieved December 10, 2015, from http://www.depressioncenter.org/work/information-for-employers/lost-productivity

6. Goodman, E., Slap, G., & Huang, B. (2003). The public health impact of socioeconomic status on adolescent depression and obesity. *American Journal of Public Health, 93*(11), 1844-1850. Retrieved from http://www.ncbi.nlm.nih.gov.

7. Husky, M., Sheridan, M., Mcguire, L., & Olfson, M. (2011). Mental health screening and follow-up care in public high schools. *Journal of the American Academy of Child & Adolescent Psychiatry, 50*(9), 881-891. doi:10.1016/j.jaac.2011.05.013

8. Lerner, M. (2014, April 17). Mental health screening and early intervention in schools. Lecture presented at PARTNERSHIPS FOR THE NEXT CENTURY: Spring 2014 Semiannual Meeting in Mission Inn Riverside, Riverside. Retrieved from https://www.cdph.ca.gov.

9. O'Connor, E., Whitlock, E., Gaynes, B., & Beil, T. (2009). Screening for depression in adults and older adults in primary care: An updated systematic review [Internet].*U.S. Preventive Services Task Force Evidence Syntheses, 75*. Retrieved from http://www.ncbi.nlm.nih.gov.

10. Richardson, L., McCauley, E., Grosssman, D., McCarty, C., Richards, J., Russo, J., . . . Katon, W. (2010). Evaluation of the patient health questionnaire-9 item for detecting major depression among adolescents. *Pediatrics, 126*(6), 1117-1123. doi:10.1542/peds.2010-0852

11. Ruble, A., Leon, P., Gilley-Hensley, L., Hess, S., & Swartz, K. (2013). Depression knowledge in high school students: Effectiveness of the adolescent depression awareness program. *Journal of Affective Disorders, 150*(3), 1025-1030. doi:10.1016/j.jad.2013.05.033

12. Screening for depression in adults: U.S. Preventive Services Task Force recommendation statement. (2009). *Annals of Internal Medicine,151*(11), 784-792. doi:10.7326/0003-4819-151-11-200912010-00006

13. Seligman, M. (2006). *Learned optimism: How to change your mind and your life.* New York: Vintage Books.

14. Silverstone, P., Bercov, M., Suen, V., Allen, A., Cribben, I., Goodrick, J., . . . Mccabe, C. (2015). Initial findings from a novel school-based program, EMPATHY, which may help reduce depression and suicidality in youth. *PLoS ONE, 10*(5), 1-29. doi:10.1371/journal.pone.0125527

15. Spirito, A., Esposito-Smythers, C., Wolff, J., & Uhl, K. (2011). Cognitive-behavioral therapy for adolescent depression and suicidality. *Child and Adolescent Psychiatric Clinics of North America, 20*(2), 191-204. doi:10.1016/j.chc.2011.01.012

16. Williams, S., O'Connor, E., Eder, M., & Whitlock, E. (2009). Screening for child and adolescent depression in primary care settings: A systematic evidence review for the US Preventive Services Task Force. *Pediatrics, 69*. Retrieved December 1, 2015, from National Center for Biotechnology Information.

17. Zuckerbrot, R., Cheung, A., Jensen, P., Stein, R., & Laraque, D. (2007). Guidelines for adolescent depression in primary care (GLAD-PC): I. Identification, assessment, and initial management. *Pediatrics, 120*(5), 1299-1312. doi:10.1542/peds.2007-1144