Depression in early adolescence: contributions from relational aggression and var...

Abstract

The purpose of this paper is to analyze an investigation conducted by Kushner, Herzhoff, K. Vrshek-Schallhorn, Tackett, and J. Vrshek-Schallhorn (2018). While there was no direct hypothesis in the article the researchers stated that their purpose was to examine whether a single nucleotide polymorphism in the oxytocin (OXTR) receptor gene would moderate the association between depression and relational aggression (RA) in youth. Their method was composed of an interview and questionnaire of youth with reports of depressive symptoms and RA and an Oragene kit to collect saliva for DNA. The researchers discovered that social problems indeed mediate an association between RA and depressive symptoms and also individuals depressively vulnerable to social problems was unique to GG homozygotes. In the future, researchers should not measure social problems and RA simultaneously and researchers should also measure the impacts of positive social behaviors on positive emotions of individuals (Kushner et al., 2018).

Introduction

The purpose of this paper is to analyze an investigation conducted by Kushner, Herzhoff, K. Vrshek-Schallhorn, Tackett, and J. Vrshek-Schallhorn (2018). The purpose of the researchers' investigation was to examine whether there is an association with RA and depressive symptoms in youth through OXTR. Kwabata, Tseng, Murray-Close, and Crick (2012) defined RA as the intentional effort to harm other individuals through exclusion and rejection which may represent a behavioral increase in depression in youth.

In specific, the individuals who carried out RA could actually increase their risk for depression.

Vulnerabilities in biology in relation to OXTR which affects both behavior and social physiological responses to stress (Heinrichs, Chen, & Domes, 2013) could influence the sensitiveness to interpersonal issues. There has been extensive research on the causes of interpersonal stress, RA, and depression. Some of the causes include: ineffective stress coping, excessive reassurance seeking, and negative feedback (Flynn, 2011; Prinstein, 2005; Borelli, 2006). According to Card (2008) and Tackett (2013), RA is a form of externalizing behavior that may contribute to depression in youth.

According to Lucas-Thompson and Holman (2013) and Olff et al. (2013) OXTR plays a role in the association between psychopathology and social experiences. Researchers believe that OXTR helps identify social cues (Bartz, Zaki, Bolger, & Ochsner, 2011). This supports the theory that OXTR has a role in RA since RA is a social behavior. Located in the third intron of the OXTR gene there is a silent single nucleotide polymorphisms (SNP) on chromosome 3p25 where there has been found a connection to unique differences in sociality. It was also found that A-allele carriers had a less significant connection to sociality versus G-allele homozygotes (Bakersman-Kranenburg & van Ijzendoorn, 2014; Li et al., 2015).

Researchers believe that there are individual differences inside OXTR presented by rs53576 that has the possibility to increase the sensitiveness to both negative and positive social cues, which results in an increase to depressive vulnerability when individuals are confronted with interpersonal

stressors (McQuaid, McInnis, Abizaid, & Anismanc, 2014). The journal article did not state a clear and direct hypothesis but it did state that the purpose of their investigation was to investigate whether OXTR has an association between RA and depression in youth.

Method

The researchers collected an overall sample size of 446 young individuals where 51. 5% were female and the average age was 11. 63. They made it clear that the children were part of a, " four-wave longitudinal investigation of personality development and behavioral outcomes" (Kushner et al., 2018). They were a part of the Child Personality and Behavior Study (CPBS). Flyers were placed around a community that was provided by the Department of Psychology of a community-based pool of participants. One of the inclusion requirements was that both parents and children needed to be fluent in English. Criterion that would result in exclusion would be the following: intellectual disability of the child, psychotic disorders, or the presence of any neurodevelopmental disorders (Kushner et al., 2018).

Assents were given by any children that were participating and informed consents were collected from the parents. The Institutional Review Board (IRB) approved the ethics of the investigation. In order to measure social problems, the researchers used an abbreviated version of the Friendship Quality Questionnaire (FQQ). The scale from the FQQ that the researchers used to measure social problems was the Conflict and Betrayal scale that the FQQ offers. The rest of the scales, the researchers did not use because they mentioned that they did not measure interpersonal problems (Kusher et al.,

2018). Depressive symptoms and social problems were also measured using the Youth Self-Report (YSR) which was given at home. From this report, the researchers used the scales that measured social problems, for example: not liked by others, gets teased, feels lonely. Then, they used the Affective Problems scale which has high accuracy for the prediction of depressive symptoms (Kushner et al., 2018).

Next, the researchers collected saliva with Oragene DNA kits which was done at home and later mailed to the lab. They did this so that, " OXTR SNP was genotyped using Sequenom iPLEX technology" (Kushner et al., 2018). Following, data was retrieved from the last two years of the assessment waves of the CPBS. Only 309 youth were included in the investigation because those provided both DNA and data from the final assessment wave. An important thing to note is that participants were compensated for their participation with a combination of gifts or monetary items.

In order to help me find a journal article for this paper, I used the Long Beach City College data base. In specific, I used the Psychology and Behavioral Sciences Collection (EBSOhost) to search for peer reviewed journal articles. I read the abstracts of various articles to pick the one that I felt I most understood. Most of the abstracts that I read had high scientific vocabulary and numerical codes for genes that I didn't understand, so I stayed away from those. Ultimately, once I found an article that I liked I went to Professor Vukov's office hours to get confirmation that I was selecting an article that would be appropriate for this paper; my article was approved and I began reading and writing.

Discussion

The researchers' purpose was to examine whether a single nucleotide polymorphism in the oxytocin (OXTR) receptor gene would moderate the association between depression and relational aggression (RA) in youth. They discovered two significant findings. One being that there was an association between depressive symptoms and RA that was mediated by social problems 1 year later, prospectively. Second, social problems and vulnerability to depression was unique to GG homozygotes. They concluded that their results were a significant genetic marker of sensitivity for interpersonal situations in externalizing behavior (Kusher et al., 2018).

These findings imply RA as a behavioral increase for depression in youth partially associated with social problems. In specific, youth can experience stress interpersonally as a result from their RA that will contribute to conditions socially that can cause an increased risk for depression (Hammen, 2005; Vrshek-Schallhorn et al., 2015). Based on prior research and findings that psychosocial consequences of RA in children and trajectorial heterogeneity (e. g., Cote et al., 2007; Vaillancourt et al., 2007) the researchers predicted that the prospective association between depressive symptoms and RA could be moderated by different individual vulnerabilities to biology (Kusher et al., 2018). The researchers state that they did not find any evidence for a gene-environment correlation, only an interaction where OXTR genotype moderated the affects of social problems related to their individual RA behavior which increased the suspicions of symptoms of depression in GG homozygotes (Kusher et al., 2018).

On the other hand, Bakermans-Kranenburg and van Ijzendoorn, 2014 also found that the GG homozygote may also increase the sensitiveness of positive social cues and have been even more associated with positivity over A-allele carriers. Because of these findings, it is believed that GG homozygotes just tend to be more vulnerable to any social environments and influences regardless if they are positive or negative.

Future Directions

One of the limitations by the investigation done by Kushner et al. (2018) was that their measures of social problems and RA were collected simultaneously. This meant that they did not examine whether social problems were directly the result of children's RA, or if children that had more exposure to social problems were more likely to have RA responses. Another limitation was that they could not be certain whether the sensitiveness of the GG homozygote could be equally reactional to independent and self-made stress. (Kusher, et al., 2018).

Another limitation by the investigation was that it did not measure any positive emotions, social cues, or functioning. So, they were not able to fully test their hypothesis. Their investigation lacks external validity because their results are a composition of their current sample and could not be generalized to other periods of development or populations. Their sample was very specific in terms of their age, organization, and self-reported RA and depressive symptoms (Kusher, et al., 2018).

Even though their sample size is considered a median sized sample for genetic analyzations, it may not have the proper power to detect the

complex associations between vulnerability to depressive symptoms, social behavior, and OXTR. In order to possibly do so, future research would require a much larger sample size. Kusher, et al. 2018 make note that there have been no existing research that measure gender in specific in the possible moderating effects.

I think the authors could improve their journal article by extending the length of the portions of their actual investigation. I believe their literature reviews were much longer compared to the sections of their investigation. If I would conduct a study in the future I would launch one that examines behavioral responses to positive and negative social cues across genders. Reading this article intrigued me to interpersonal reactions. I think it would be interesting to examine the physiological responses of interpersonal situations across genders of all ages.

If I would be given a second chance to improve the process of writing my research paper based on the investigation above, I would have turned in a rough draft. I feel like there was so much scientific vocabulary due to it being based on psychology *and* biology. I tried my very best to paraphrase and cite but for some reason it was hard not to use so many scientific terms and I am not sure if the way I paraphrased will make sense to a scientist. Maybe the second time around I would have picked an article that did not talk about such specific genes because there was a lot of codes that I had no clue what they meant or represented.

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