Comorbidity of Anxiety and Depression in Adults: A Research Proposal

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Abstract

The comorbidity of anxiety and depression has attracted substantial clinical attention and a great deal of research, but no conclusive results have been provided as to the specifics of the link existing between the two disorders. In this research proposal, a hypothesis is developed that there exists a bidirectional relationship between anxiety and depression, with a specific focus being placed on the investigation of the interplay of symptoms shared by both disorders. To support the hypothesis, a qualitative study is proposed to be conducted using a sample of 30 individuals who would fill out the self-report questionnaires. The data is suggested to be analyzed using a three-step coding process and triangulation. As expected, this process should help shed light on the nature of the relationship between anxiety and depression, resolving the controversy and increasing current understanding about how to better manage and treat the comorbidity of the two disorders and which interventions to implement in such cases.

Keywords: anxiety, depression, comorbidity, correlation, relationship, symptom.

Comorbidity of Anxiety and Depression in Adults: A Research Proposal

The comorbidity of anxiety and depression is a common occurrence for the adult population, with the evidence showing that there exists high correlation between the symptoms of both disorders (Groen et al., 2020). The researchers confirm the link between anxiety and depression; nevertheless, the exact manner in which the two conditions overlap raises many questions. In general, the scholars argue that comorbidity predicts poorer outcomes as compared to the cases when a single disorder is considered. Similalry, Malone and Wachholtz (2019) indicate that when anxiety and depression are comorbid, which is occurring simultaneously, the patient is likely to experience the greater level of discomfort and incur hither medical costs. The comorbidity phenomenon has attracted substantial clinical attention and a great deal of research, but no conclusive results have been provided as to the specifics of the link existing between anxiety and depression. In this research proposal, a hypothesis is developed that there exists a bidirectional relationship between the two disorders, with a specific focus being placed on the investigation of the interplay of symptoms shared by both anxiety and depression, which could potentially resolve the controversy surrounding the nature of their comorbidity.

Literature Review

Bidirectional Relationship between Anxiety and Depression: Analysis

Similarities and Differences

After reviewing the recent evidence-based studies and scholarly articles discussing comorbidity of anxiety and depression in adults, it becomes evident that studies have found that there exists a bidirectional relationship between the two disorders. Though the manner in which the anxiety and depression are linked remains not confirmed by the longitudinal studies, a consensus has been found that anxiety can be a complication of depression, and depression can be a frequent complication of anxiety. Specifically, Groen et al. (2020)

reported that of those individuals with a primary anxiety diagnosis, more than 60% had a current depressive disorder diagnosis, and more than 80% suffered from a lifetime comorbid depressive condition. In like manner, the authors reported that almost 70% of the patients who had a primary depressive disorder also suffered from a co-occurring current anxiety disorder; furthermore, more than 75% of these patients indicated having a co-occurring lifetime anxiety disorder. These findings are supported by the results obtained by Cosci and Fava (2021), Malone and Wachholtz (2019), and Zhou et al. (2017) who discovered that the prevalence of comorbidity of anxiety and depression is more than 76%, which allowed them to conclude that the two disorders commonly coexist, with one disorder frequently being the complication of the other.

The strength of directionality between anxiety and depression, as stated by Shao et al. (2020), has been sufficiently studied, with the findings indicating that there exists a bidirectional prospective relationship between the two disorders at the symptom as well as disorder levels. The high correlation levels between anxiety and depression have also been reported by Jacobson and Newman (2017) who found that anxiety symptoms acted as predictors of subsequent depression, while symptoms of depression were predictors of the subsequent anxiety. Yet, contrary to the findings provided by Cosci and Fava (2021), Groen et al. (2020), Malone and Wachholtz (2019), Shao et al. (2017), and Zhou et al. (2017), Jacobson and Newman (2017) suggested that anxiety was a stronger predictor of depression than vice versa. Furthermore, they discovered that even though anxiety and depression were closely related, depressive disorders more commonly predicted phobias than other anxiety disorders. The value of these findings is that not only the results by Jacobson and Newman (2017) support the hypothesis of the bidirectional link or connection between anxiety as well as depressive symptoms, but they also provide evidence on the possible nature of the relationship between the two disorders.

Limitations

The findings of the studies discussed above should be considered in view of their limitations. First, Malone and Wachholtz (2019), Shao et al. (2017), and Zhou et al. (2017) researched correlation between anxiety and depression; Chinese adults were subjects in the study, and therefore their results may not be applied to other populations. Second, all studies argued that there exists a bidirectional prospective link or connection between anxiety as well depression, yet none of those studies provided a hypothesis as to the reasons for comorbidity. Even though Jacobson and Newman (2017) suggested that anxiety was astronger predictor of the subsequent depression than vice versa, they nonetheless did not discuss the nature of this specific relationship, leaving room for speculations. The only study that attempted to shed light on the nature of the relationship between the two disorders was that by Groen et al. (2020) who found that co-occurring disorders take place because of the intertwined nature of symptoms, which overlap in anxiety and depression. Specifically, the mental state of "worrying" was found to serve as a bridge mental state promoting development of comorbid anxiety and depression, a finding that requires further investigation and clarification.

Synthesis

As seen from the discussion of the studies provided above, there is a general consensus that anxiety and depression are frequently associated. In fact, there has been found high correlation between the two disorders, suggesting that anxiety and depression act as related risk factors for one another. The findings provided by Groen et al. (2020) illustrate that the mental state of "worrying" serves as a bridge mental state for the development of comorbidity. When combined with the results obtained by Jacobson and Newman (2017) arguing that anxiety acts as a stronger predictor of depression, a gap in knowledge can potentially be filled, shedding light on how exactly or in which manner anxiety and depression overlap. Specifically, the degree to which a symptom of "worrying" may act as a

bridge can be quantified, increasing current understanding as to the reasons for comorbidity of anxiety and depression. Additionally, the intertwined and complex nature of symptoms which the conditions exhibit can be investigated, potentially resolving the controversy surrounding them.

Methods

Participants

In view of the limitations discovered during the process of reviewing the literature, the present research proposal suggests to investigate the comorbidity of anxiety and depression using a diverse sample that would be more representative of the United States (US) population. When looking at the 2020 US Census data, it becomes evident that the US population is 331,893,745, with 50.8% of those individuals being females and 49.2% males, respectively. Of those, 60.1% are White, 18.5% - Hispanic/Latino, 13.4% - Black, 5.9% - Asian, 2.8% - Two or More Races, 1.3% - American Indian or Alaska Native, and 0.2% - Native Hawaiian and Other Pacific Islander. When looking at the adult population specifically, the 2020 US Census data states that 71.7% of the US population is 18 years and over, and 16.5% are 65 years and over, with the current life expectancy of an average American of either gender being around 80 years.

When using the above-discussed statistics, it can be said that the specific sample for the present study that would resemble the US population should include both males and females aged 18-65 years. The size of the sample should be sufficient to gather data and draw valid conclusions, meaning at least 30 participants (15 males and 15 females) should be enrolled. The city of New Rochelle, State of New York can be suggested as an area from which the sample could be drawn due to this city being diverse and as similar to the larger population as possible. Specifically, the 2021 Census data estimates the population of New Rochelle is 79,726, with 52.2% being females, and 47.8% males, respectively. Of those,

43.6% are White, 30.2% - Hispanic/Latino, 20.1% - Black, 5.2% - Asian, 3.2% - Two or More Races, 0.1% - American Indian or Alaska Native, and 0.1% - Native Hawaiian and Other Pacific Islander. When looking at the adult population specifically, the 2021 US Census data states that 74.4% of the city's population is 18 years and over, and 17.6% are 65 years and over, with the current life expectancy of an average citizen of either gender being around 79 years.

Measures

As measures to investigate the comorbidity of anxiety and depression, The Beck Anxiety Inventory (BAI) and The Beck Depression Inventory (BDI) can be suggested as tools to understand the interplay between the symptoms of both disorders. Both instruments are considered to be the most popular screening and outcome research measures as well as, as the original authors Beck et al. (1988) and Beck et al. (1992) argued, the most appropriate to be used in research studies with both clinical and non-clinical samples (as cited in Bardhoshi et al., 2015; Dozois et al., 1998). Both the BAI and the BDI are self-report tools that have been extensively studied and found to be reliable and valid instruments. Specifically, the BAI has proven itself to be a highly internally consistent instrument (Cronbach's alpha = .94) with a high test-retest correlation (r = .67) for measuring symptoms of anxiety (Toledano-Toledano et al., 2020). Similarly, the BDI has also proven itself to be a highly internally consistent tool (Cronbach's alpha = .91) with a high test-retest correlation (r = .93) for measuring symptoms of depression (Garcia-Batista et al., 2018). In other words, the evidence has found that both the BAI and the BDI are valid and reliable tools, and therefore they can be used in the present study to investigate the occurrence and severity of each disorder as well as their comorbidity and symptom interplay.

Procedures

Since the present study aims to investigate the sample that would be representative of the general population, a random sampling technique should be used. Specifically, invitations could be sent using social media platforms to reach as many individuals as possible. Those invitations would need to contain the information pertaining to the study, such as purpose, objectives, design, timeframe, ethical considerations, participant rights and welfare, and explanations in regards to what measures would be used and how the data would be gathered and analyzed. After reaching the required number of participants with characteristics that would allow generalizing the results of the present study, the electronic versions of the BAI and the BDI would be sent to the enrollees for them to fill the assessments out and send back for data analysis and synthesis. Since the present study investigates the correlation between anxiety and depression, the data obtained from the participants would be analyzed using the three-step coding process outlined by Creswell (2012) and described by Akinyode and Khan (2018) to identify the recurring themes, key words and phrases, and relationships between the themes.

Results and Discussion

As mentioned above, the three-step coding process would be used to analyze data in the present study. The reliability of the study would be ensured by conducting the same measurements on the same sample once in 4 weeks over a period of 3 months. In turn, validity would be ensured by acknowledging biases in sampling, and by using the tools that are relevant for data collection and analysis. Additionally, cross-validation, also known as triangulation, would be used to obtain a final understanding and interpretation of the results. As expected, this process should help investigate the interplay between the symptoms of anxiety and depression, shedding light on the nature of the relationship between the two disorders, thus adding valuable information to the research and public bases of knowledge.

Specifically, if the mental state of "worrying" would indeed be found to serve as a bridge mental state promoting the development of comorbid anxiety and depression, the controversy surrounding the nature of the relationship between the two disorders could be resolved. This realization in turn would help increase understanding about how to better manage and treat the comorbidity of anxiety and depression and which interventions to implement in such cases.

When interpreting the results of the present study, several limitations however should be considered. First, the symptoms of anxiety and depression would be assessed subjectively using the self-report instruments, which could produce inaccurate or invalid data. Second, since the invitations for participation would be sent to the general population, it could result in self-selection bias, meaning those with anxiety or depression symptoms could be less motivated to participate in the study or, on the other hand, could be more likely to participate since the topic would be relevant to them. Still, it could be argued that the present study is needed, because it has the potential to expand upon the current body of knowledge in regards to the comorbidity of anxiety and depression. Therefore, the study and its results should be shared with the public and research community in a peer-reviewed journal and a conference. Specifically, the *BMC Psychology* journal could be contacted to communicate the results due to this publication being considered as one of the most respected in the field. As regards the conference, the American Psychological Association (2022) recommends the *Tackling Stigma, Mobilizing Hope: Opening Doors to Quality Mental Health Care for All* event as one where innovative research could be shared to improve the lives of each and everyone.

Conclusions

In conclusion, the review of relevant literature on the comorbidity of anxiety along with depression allowed to reveal that there is a bidirectional relationship between the two disorders. Yet, the fact that these findings have been obtained from samples of Chinese adults

suggests that future studies should investigate this matter using more diverse participants that would be more representative of the larger population. What is more, to better understand the nature of the comorbidity between anxiety and depression, it would be useful to closer evaluate the nature of symptoms that the conditions exhibit. Specifically, quantifying the degree to which a symptom of "worrying" may act as a bridge to the occurrence of comorbid anxiety and depression could add more evidence to the current knowledge regarding both the nature of the relationship between the two disorders and the reasons for comorbidity.

In the present research proposal, the random sample of 30 individuals is suggested to be enrolled using invitations sent via social media platforms. After reaching the required number of participants with characteristics that would allow generalizing the results of the present study, the electronic versions of the BAI and the BDI would be sent to the enrollees for them to fill the assessments out and send back for data analysis and synthesis. The three-step coding process would be used to analyze data, and cross-validation, also known as triangulation, would be applied to obtain a final understanding and interpretation of the results. As expected, this process should help investigate the interplay between the symptoms of anxiety and depression, shedding light on the nature of the relationship between the two disorders. Specifically, if the mental state of "worrying" would indeed be found to serve as a bridge mental state promoting the development of comorbid anxiety and depression, the controversy surrounding the nature of the relationship between the two disorders could be resolved, increasing current understanding about how to better manage and treat the comorbidity of anxiety and depression and which interventions to implement in such cases.

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