Review Article

The Transdiagnostic Nature of Social Anhedonia: Review of Recent Research Findings Using the ACIPS

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1. Abstract

The present mini-review outlines recent research on social anhedonia using the Anticipatory and Consummatory Interpersonal Pleasure Scale (ACIPS). The research is presented in the context of understanding the significance of social anhedonia. Future directions for research and possible treatment implications are provided.

2. Introduction

Social anhedonia can be broadly defined as a deficit in pleasure from social contact, reduced experience of reward from social interaction, and/or reduced motivation and disinterest in pursuing relationships. A growing body of evidence supports the notion that individuals characterized by aberrantly high levels of social anhedonia are at heightened risk for the later development of schizophrenia-spectrum disorders [1-3]. Thus, it appears that social anhedonia is uniquely associated with schizophrenia and schizophrenia-spectrum disorders. Despite this, social anhedonia is present in various forms of psychopathology, such as depressive disorders, eating disorders, substance use disorders, PTSD, and autism [4].

3. Measuring Social Anhedonia

Several measures exist to measure pleasure and/or anhedonia, though there are relatively few measures which specifically assess social anhedonia. The most well known direct measure of social anhedonia is the revised Social Anhedonia Scale [RSAS; 5]. An indirect measure of social anhedonia is the Anticipatory and Consummatory Interpersonal Pleasure Scale [ACIPS; 6]. The ACIPS was specifically designed to assess individual differences in the ability to experience pleasure from social and interpersonal interactions, e.g., sharing experiences and feelings, and communicating feelings with others, whether in person or remotely. Prior research [6,7], indicates that although the RSAS and ACIPS are significantly and negatively correlated with each other, they appear to measure different aspects of social anhedonia. The ACIPS is more closely associated with measures of positive valence, such as prosocial orientation, positive affect, and sociability [8].

4. The Anticipatory and Consummatory Interpersonal Pleasure Scale (ACIPS)

Scored on a Likert scale, the 17-item ACIPS uses a total score whereby lower scores indicate greater social anhedonia. The psychometric properties are described elsewhere [9]. Briefly, the ACIPS has demonstrable construct validity and test-retest validity. To date, the ACIPS has been translated to several languages, including: Mandarin Chinese, Korean, Spanish, Italian, Portuguese, German, Hebrew, French and Dutch. Currently there are three versions of the ACIPS: one suitable for children (ages 7 through 12), adolescents (13 through 17), and adults (18 and over). The child- and adolescent- versions were modified to be developmentally appropriate. More information regarding the adolescent version of the measure can be found elsewhere [10]. The ACIPS has been administered several times to diverse community samples, selective college samples, and patient samples. Due to its short length, the ACIPS may be administered as part of a predominantly biobehavioral battery, used as clinical assessment, or utilized as a screening instrument to determine eligibility for an intervention trial.

5. Review of ACIPS Findings in Patient Samples

Increasingly investigators are using the adult version of the ACIPS to demonstrate the trans diagnostic nature of social anhedonia. **Table 1** provides a summary of recent findings

regarding various patient groups' performance on the measure. As indicated in Table 1, social anhedonia is present in individuals with schizophrenia-spectrum disorders, depressive disorders, and autism spectrum disorders (ASD). Similarly, psychiatric patients with and without a history of psychosis report lower levels of social pleasure than community controls without a psychiatric history. In one [11] sample, the majority (13 of 23, or 56.5%) of the psychiatric patients with a history of psychosis had a diagnosis of schizophrenia-spectrum disorder, while the largest proportion (35%) of patients without a psychosis history had a diagnosis of depression. Although suggestive, the small numbers of patient diagnoses within each group in that investigation warrants caution.

Table 1. ACIPS in Community and Patient Populations: A Comparison.

Study	Diagnostic Description	Mean (± SD) ACIPS scores
Bedwell et al. 2014	Patients with history of psychosis	70.17 (18.04)
	Patients with no history of psychosis	79.13 (10.68)
	No psychiatric disorder or history of psychosis	86.24 (12.52)
Bedwell et al. 2018	Schizophrenia-spectrum outpatients	71.36 (15.60)
	Unipolar Depression	77.58 (9.27)
	Bipolar Disorders	81.38 (13.13)
	No current psychiatric disorder	84.65 (12.06)
Ritsner et al. 2018	Schizophrenia inpatients	76.2 (1.7)
	Schizoaffective disorder inpatients	84.3 (1.8)
Han et al. 2019	Autism spectrum disorder	73.47 (18.96)
	Major Depressive disorder	78.46 (12.77)
	Healthy controls	92.73 (7.51)

ACIPS = Anticipatory and Consummatory Interpersonal Pleasure Scale (Gooding &Pflum, 2014). Mean (± standard deviation) scores provided. Lower scores indicate less social/interpersonal pleasure and greater social anhedonia.

However, a later study by the Bedwell group [12] provides support for the earlier findings. The schizophrenia-spectrum disordered group and the unipolar disorder group both displayed significant social anhedonia relative to the community controls. An advantage of the Ritsner et al. [13], investigation was the relatively large sample size, though the investigators did not include a community-derived comparison group. More recently, transdiagnostic investigation by Han et al. [14], indicated no significant difference between adults with ASD and adults with depression in levels of social anhedonia. They noted that both groups reported significantly greater social anhedonia than typically developing controls.

Research using the ACIPS also indicated that there is considerable heterogeneity within patient populations, in that not all schizophrenia-spectrum patients report social anhedonia. When present, social anhedonia in schizophrenia-spectrum patients has been significantly associated with poorer functional outcomes, including lower levels of perceived social support, poorer quality of life, and lower sense of subjective recovery [13]. Findings from Han et al. [14] suggest that in individuals with ASD, aberrant social reward processing may, through loneliness, have an etiological role in depressive outcomes. Taken together, one can conclude that social anhedonia characterizes patients with schizophrenia-spectrum disorders, regardless of whether they are inpatients or outpatients. It is also present in adult individuals with major depressive disorder and autism-spectrum disorder. To date, there is only one published report of social anhedonia scores in a group of bipolar disorder patients.

6. Implications and Future Directions

Investigations in which various patient groups are compared [e.g., 11-14] are particularly useful in terms of demonstrating the ways in which social anhedonia is a transdiagnostic symptom. Further research is necessary in order to explore the presence of social anhedonia across different diagnostic groups, preferably with larger sample sizes. It would be especially interesting to include patients with bipolar disorder, substance-related disorders, and eating disorders. It would also be useful to study patients with comorbid conditions; a particular strength of the Bedwell et al. study [11] was its inclusion of comorbid conditions, such as mood disorders and psychosis. An advance in this line of research could focus on, for example, social reward processing in patients with schizophrenia-spectrum disorders and comorbid substance-use disorders.

Altogether, there is a growing literature, which supports incorporating the ACIPS as a screening measure for individuals experiencing various forms of psychopathology. This screening may be a cost-effective way of targeting those individuals who are most likely to benefit from specific targeted interventions. Such targeted interventions might be directed at ameliorating social reward deficits, bolstering social skills, addressing low pleasure beliefs, and/or assisting individuals in finding more positive means of engaging their social environments.

References

1. Kwapil TR. Social anhedonia as a predictor of the development of schizophrenia-spectrum disorders. Journal of Abnormal Psychology. 1998; 107: 558-565.

2. Gooding DC, Tallent KA, Matts CW. Clinical status of at-risk individuals five years later: Further validation of the psychometric high-risk strategy. Journal of Abnormal Psychology. 2005; 114: 170-175.

3. Miettunen J, Viejola J, Isohanni M, Paunio T, Freimer N, Jåaskelinen E et al. Identifying schizophrenia and other psychoses with psychological scales in the general population. Journal of Nervous and Mental Disease. 2011; 199: 230-238.

4. Barkus E, Badcock J. A transdiagnostic perspective on social anhedonia. Frontiers in Psychiatry. 2019; 10:216.

5. Eckblad ML, Chapman LJ, Chapman JP, Mishlove M. The revised Social Anhedonia scale. Madison, Wisconsin: University of Wisconsin-Madison, 1982.

6. Gooding DC, Pflum MJ. The assessment of interpersonal pleasure: Introduction of the Anticipatory and Consummatory Interpersonal Pleasure Scale (ACIPS) and preliminary findings. Psychiatry Research. 2014; 215(1): 237-243.

7. Gooding DC, Pflum MJ. The assessment of interpersonal pleasure II: Further validation of the ACIPS as a measure of social hedonic experience. Psychiatry Research. 2014; 215(3): 771-777.

8. Gooding DC, Padrutt ER, & Pflum MJ. The predictive value of the NEO-FFI items: Parsing the nature of social anhedonia using the Revised Social Anhedonia Scale and the ACIPS. Frontiers in Psychology. 2017; 8:147.

9. Gooding DC, Pflum MJ. The ACIPS: Moving forward in the assessment of negative symptoms. Schizophrenia Research.2016; 176: 327-328.

10. Gooding DC, Pflum MJ, Fonseca-Pedrero E, Paino M. Assessing social anhedonia in adolescence: The ACIPS-A in a community sample. European Psychiatry. 2016; 37: 49-55.

11. Bedwell JS, Gooding DC, Chan CC, Trachik B. Anhedonia in the age of RDoC. Schizophrenia Research. 2014; 160: 226-227.

12. Bedwell JS, Spencer CC, Chan CC, Butler PD, Sehatpour P, Schmidt J. PI visual-evoked potential, red light, and transdiagnostic psychiatric symptoms. Brain Research. 2018; 1687: 144-154.

13. Ritsner MS, Ratner Y, Mendyk N, Gooding DC. The characterization of social anhedonia and its correlates in schizophrenia and schizoaffective patients. Psychiatry Research. 2018; 270: 922-928.

14. Han GT, Tomarken AJ, Gotham KO. Social and nonsocial reward moderate the relation between autism symptoms and loneliness in adults with ASD, depression, and controls. Autism Research. 2019; 12: 884-896.