Perceived Discrimination in those at Clinical High Risk for Psychosis

Majid M. Saleem[1], **Jacqueline Stowkowy**[1], **Kristin S. Cadenhead**[2], **Tyrone D. Cannon**[4,8], **Barbara A. Cornblatt**[3], **Thomas H. McGlashan**[4], **Diana O. Perkins**[5], **Larry J. Seidman**[6], **Ming T. Tsuang**[2], **Elaine F. Walker**[7], **Scott W. Woods**[4], and **Jean Addington**[1]

[1]Department of Psychiatry, University of Calgary, Calgary, Alberta, Canada

[2]Department of Psychiatry, UCSD, San Diego CA

[3]Department of Psychiatry, Zucker Hillside Hospital, Long Island NY

[4]Department of Psychology, Yale University, New Haven CT

[5]Department of Psychiatry, University of North Carolina, Chapel Hill NC

[6]Department of Psychiatry, Harvard Medical School at Beth Israel Deaconess Medical Center and Massachusetts General Hospital, Boston MA

[7]Departments of Psychology and Psychiatry, Emory University, Atlanta GA

[8]Departments of Psychology and Psychiatry and Biobehavioral Sciences, UCLA, Los Angeles CA

Abstract

Aim—There is evidence to suggest that perceived discrimination may be associated with psychosis. Less is known about its potential impact on those at clinical high risk (CHR) for psychosis. The aim of this study was to determine the prevalence of perceived discrimination in a CHR sample and its possible relationship to attenuated positive symptoms and negative self-beliefs.

Methods—Participants were 360 CHR individuals and 180 healthy controls. Assessments included a self-report measure of perceived discrimination, the Scale of Prodromal Symptoms and the Brief Core Schema Scale.

Results—CHR participants reported significantly more perceived discrimination. Perceived discrimination was significantly associated with negative schemas but not with attenuated positive symptoms.

Conclusions—These results suggest that individuals at CHR for psychosis endorse a higher level of perceived discrimination which is associated with increased negative schemas but not attenuated positive symptoms.

Keywords

clinical high risk; psychosis; perceived discrimination; prodrome; risk

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*Corresponding Author: Dr Jean Addington, Mathison Centre for Mental Health Research and Education, University of Calgary, 3280 Hospital Drive NW, Calgary, Alberta T2N 4Z6 Canada. jmadding@ucalgary.ca.

Introduction

Discrimination can be defined as the prejudicial treatment of an individual or group based on certain characteristics such as ethnicity, immigration status, age and sex.[1] It has many facets and can be found in opinions, attitudes and behaviors, and may be measured by objective events or by subjective perceptions of events.[2] In research settings discrimination is often measured as perceived or subjective due to the difficulties in accurately assessing levels of objective discrimination.[3] There is support that it is perceived discrimination itself and not actual discrimination that is associated with mental illness.[4]

With respect to psychosis a prospective Dutch population study demonstrated that a chronic experience of discrimination may eventually lead to a paranoid attributional style and consequently increase the likelihood of psychotic-like experiences.[5] A number of additional studies have demonstrated significant associations between perceived discrimination and psychosis in ethnic minority and immigrant groups with the incidence of psychosis being higher when groups perceive more discrimination.[1,6,7] Furthermore, incidence rates of psychosis have been shown to be equal among first and second generation immigrants, indicating that post immigration stressors are equally as important as pre-migration.[8, 9] Perceived discrimination is not just related to ethnicity but to other characteristics such as age, gender, religion, disability or sexual orientation.[1]

The current interest in prospective research, that examines individuals who appear to be at clinical high risk (CHR) of developing psychosis,[10] offers another opportunity to examine the role of perceived discrimination in the development of psychosis. To the best of our knowledge there are no studies examining perceived discrimination in those at CHR. However, recent studies with those at CHR of psychosis have shown that these young people endorse negative beliefs about themselves to a greater extent than healthy controls[11] and that these beliefs are associated with greater symptom severity.[12] Furthermore, there is some evidence to suggest that negative schemas may play a role in the development of psychosis.[13] These schemas can be characterized as negative beliefs about one's own self and other people and it is possible that there may be a connection between perceived discrimination and negative schemas in psychosis.

The aims of this study were to first examine the prevalence of perceived discrimination in individuals at CHR for psychosis compared to a healthy control group, secondly to determine the relationship of perceived discrimination to attenuated positive symptoms and finally to determine if perceived discrimination was associated with negative self-beliefs.

Methods

Participants

All participants were recruited as part of the multi-site NIMH funded North American Prodrome Longitudinal Study 2 (NAPLS 2)[14] which was established to investigate predictors and mechanisms of conversion to psychosis. The sample consisted of the first 360 CHR participants (211 male, 149 female) and 180 age-matched healthy controls (87 male, 93 female). All CHR participants were required to meet the Criteria of Prodromal Syndromes (COPS) using the Structured Interview for Prodromal Syndromes (SIPS).[10] Participants were excluded if they met criteria for any current or lifetime axis I psychotic disorder, IQ< than 70, past or current history of a clinically significant central nervous system disorder. Control participants were also excluded if they had a first degree relative with a current or past psychotic disorder. A more detailed description of ascertainment, inclusion and exclusion criteria, and participant details is provided elsewhere.[14]

Measures

The Structured Interview for Prodromal Syndromes (SIPS) and the Scale for Assessment of Prodromal Symptoms (SOPS)[10] were used to establish whether the criteria of prodromal syndromes were met and to determine severity of attenuated positive symptoms. Groups were assessed on; sex, age, years of education, ethnicity, immigrant status, marital status and employment. Ethnicity was defined as; First Nations, East Asian, Southeast Asian, South Asian, Black, Central/South American, West/Central Asian and Middle East, White, Native Hawaiian or Pacific Islander and Interracial. Immigration status was collected as follows; 1) born in the USA/Canada and not 1st or 2nd generation, 2) 1st generation migrant with subject and parents born abroad, 3) 1st generation migrant plus subjects and parents born abroad when subjects came to USA/Canada before age 5 and 4) 2nd generation migrant born in USA/Canada with one or both parents born abroad.

Perceived discrimination was assessed using an adapted self-report measure.[5] Participants answered 'yes' or 'no' to whether or not they had experienced discrimination in the past year because of their skin colour; ethnicity; gender; age; appearance; disability; sexual orientation; religion; or other reason. Total perceived discrimination was calculated as the total number of "types of discrimination" that were endorsed.

The Brief Core Schema Scale (BCSS) [15] is a self-report measure that was used to assess negative schemas. The BCSS has 24 items concerning beliefs about the self and others that are assessed on a 5-point rating scale. This scale has been demonstrated to be valid in a CHR population.[16]

Procedures

The study was approved by the Institutional Review Boards of all eight NAPLS sites. Informed consent was obtained from those who met criteria and were judged fully competent to give consent. Parental consent was obtained from parents/guardians of participants who were under age 16. Participants were assigned a clinical rater who conducted all the semi structured interviews. Raters were experienced research clinicians. Gold standard post-training agreement on determining the prodromal diagnoses was excellent (kappa=0.90).[14]

Statistical Analysis

Chi square analysis (χ^2) for categorical variables and Student t-tests for continuous variables were used to compare the groups on demographics, and negative schemas. Mann Whitney U test was used to compare the total perceived discrimination and negative schemas between the CHR groups and the control group.

Ethnicity was divided into two sub categories (white and other) and immigration status was subdivided into two different categories (born in the USA/Canada and 1st or 2nd generation migrant).

Associations between perceived discrimination and attenuated positive symptoms, negative schemas and age were examined using Kendall's tau coefficient (two tailed). Contingency coefficients were used to examine associations between perceived discrimination and demographics relevant for discrimination (ethnicity, immigration status and sex). Spearman's correlations were used for associations between attenuated positive symptoms and negative schemas.

Results

There were no significant differences between groups on any of the demographic measures assessed with the exception of years of education (t=3.56, p<0.001) and sex (χ^2=5.12, p<0.05). These results are presented in Table 1.

As presented in Table 2, CHR participants reported significantly higher frequencies of perceived discrimination on the total level of perceived discrimination and on all individual items with the exception of ethnicity and sex.

CHR participants reported significantly higher levels of negative schemas about the self (U=196.23, p<0.0001) and about other people (U=136.04, p<0.0001) compared to HC. Since these two items were highly correlated (r = 0.55, p<0.0001), a total negative schema score was created by calculating the sum of the two variables. CHR participants reported significantly higher levels of total negative schemas (U=130.98, p<0.0001) compared to HC.

Perceived discrimination was not related to either total positive symptoms or any of the individual positive symptoms in the CHR group. Negative schemas were not related to either total attenuated positive symptoms or any of the individual attenuated positive symptoms in the CHR group. However, perceived discrimination was significantly associated with negative schemas and older age in both groups. In the control group only, perceived discrimination was significantly associated with being from an ethnic minority as well as being female. Immigrant status was not related to perceived discrimination in either group. These results are presented in Table 3.

Discussion

In this study the sample of young people at CHR for psychosis reported experiencing more perceived discrimination than a healthy control group. However, in both groups increased perceived discrimination was associated with an increased presence of negative schemas (negative thoughts and feelings about themselves and other people). Interestingly, these differences could not be accounted for by the presence of attenuated psychotic symptoms since attenuated psychotic symptoms were related to neither perceived discrimination nor schemas in the CHR group. Unlike previous studies examining perceived discrimination in psychosis[6,7], perceived discrimination for the CHR group was not related to any of the demographic variables assessed such as belonging to a minority group, being an immigrant or being female. This might suggest that there is something operating in the environment of these individuals that is potentially making them feel more sensitive, and therefore contributes to the higher incidence of perceived discrimination in this population. A possible explanation may be that the negative schemas are contributing to a pervasive sense of negative thoughts and feelings about themselves and other people thus leading to an increase in perceptions of discrimination.

There were several limitations in this study. First, we were unable to use more detailed assessments of perceived discrimination such as the Perceived Ethnic Discrimination Questionnaire[17] which might have provided a more robust measurement of the reasons for perceived discrimination. Secondly, it was beyond the scope of this study to obtain independent measures of perceived discrimination or even actual discrimination from other sources such as school teachers or specific socio-graphic tools. Thus, we do not have data on the frequency of perceived discrimination nor the individual's perception of its severity (i.e., whether it was a major life changing incident or daily minor incidents) nor when it began. Thirdly, the sample lacked diversity in terms of immigration and ethnicity was defined as either Caucasian or non-Caucasian, eliminating the possibility of examining any potential differences amongst ethnic groups. The limitation of our measurement of perceived

discrimination makes it difficult to interpret the association between negative schemas and perceived discrimination and the role of attenuated positive symptoms.

Thus, in summary those at CHR for psychosis do have increased perceptions of discrimination. These preliminary ideas need to be further explored along with examining the relationship of perceived discrimination and later transition to psychosis.

Acknowledgments

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Table 1

Demographics

	Healthy Control (N=180)	Clinical High Risk (N=360)	Test Statistic
	Mean (SD)	Mean (SD)	t-value
Age in years	19.54 (4.77)	18.99 (4.18)	1.36
Years of education	12.49 (3.60)	11.49 (2.76)	3.57***
	N (%)	N (%)	χ^2
Male	87(48.3)	211(58.6)	5.12*
Ethnicity			
Caucasian	106(58.9)	198(55)	8.85
Non-Caucasian	74(41.1)	162(45)	
Immigrant status			
1st or 2nd generation immigrant	16(8.9)	20(5.6)	2.14
Non-immigrant	164(91.1)	340(94.4)	
Marital Status			
Single	170(94.4)	340(95)	6.07
Currently enrolled as student			
Yes	148(82.2)	289(80.7)	0.29

*
p<0.05,

***
p<0.001

Table 2

Differences between Groups in Frequency of Perceived Discrimination in the Past year

	Healthy Control (N=180)	Clinical High Risk (N=360)	Test Statistic
	N (%)	N (%)	χ^2
Appearance	27 (15.0%)	145 (40.3%)	35.32[***]
Age	32 (17.8%)	108 (30.0%)	9.08[**]
Skin color	17 (9.4%)	69 (19.2%)	8.47[**]
Ethnicity	23 (12.8%)	71 (19.7%)	3.02
Sex	20 (11.1%)	58 (16.1%)	3.13
Religion	8 (4.4%)	44 (12.2%)	8.34[**]
Disability	1 (0.6%)	34 (9.4%)	15.64[***]
Sexual orientation	5 (2.8%)	35 (9.7%)	8.44[**]
Other	3 (1.7%)	34 (9.4%)	11.37[***]
	Mean (SD)	Mean (SD)	Z
Total perceived discrimination	0.73 (1.2)	1.59 (1.8)	−6.04[***]

[**]
p<0.01,

[***]
p<0.001

Table 3

Correlations between Total Perceived Discrimination in the Past Year and Positive Symptoms, Negative Schemas, Ethnicity, Immigrant Status, Age and Gender

	Total Perceived Discrimination	
	Healthy Control (N=180)	CHR (N=360)
	Kendall's tau	
P1-Unusual Thoughts/Delusions	−0.06	−0.04
P2-Suspiciousness	−0.04	0.01
P3-Grandiose Ideas	−0.08	−0.07
P4-Perceptual Abnormalities	−0.06	−0.04
P5-Disorganized Communication	−0.07	−0.02
Total Positive Symptoms	−0.05	−0.04
Total Negative Schemas	0.19*	0.25**
Older Age	0.18**	0.19**
	Contingency Coefficient	
Ethnic Minority	0.28*	0.21
Immigrant Status	0.23	0.18
Female Sex	0.29*	0.19