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Psychiatric treatment received by primary care patients with panic disorder with and without agoraphobia

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Abstract

Objective—Although the majority of individuals with panic disorder first present to the primary care setting, little is known about the psychiatric treatment primary care patients with the disorder typically receive. The purpose of the current study was to explore characteristics of treatment received by those with panic disorder with and without agoraphobia, examine demographic and clinical predictors of receiving treatment, and explore treatment barriers.

Methods—This study uses data from the Primary Care Anxiety Project (PCAP), which is a naturalistic, longitudinal study of anxiety disorders in primary care patients. This study presents data on 235 PCAP participants diagnosed with panic disorder with (N=150) or without agoraphobia (N=85) at the study intake assessment.

Results—Many patients with panic disorder were not receiving psychiatric treatment at study intake, with those without agoraphobia being less likely to receive treatment. Psychotropic medications were the treatment of choice, with SSRIs/SNRIs being the most commonly received class of medications. Only 39% of those with panic disorder with agoraphobia and 24% of those without agoraphobia were receiving psychotherapy, and use of empirically supported interventions was rare. The most common treatment barriers were: not believing in utilizing medication/therapy for emotional problems and not receiving a treatment recommendation from one's provider.

Conclusions—The findings suggest a need for better treatment dissemination, in addition to making interventions more accessible and/or adapting them to the particular needs of primary care patients.

Panic disorder is fairly common, with a 12-month prevalence rate of 2.7% and a lifetime rate of 4.7% (1,2). The course of panic disorder tends to be chronic, with high rates of recurrence after remission, particularly for panic disorder with agoraphobia (3-5). Furthermore, individuals with panic disorder experience considerable impairment and disability, including occupational difficulties (6-9), impaired well-being (10-12), and reduced quality of life (9-14). They also have higher rates of healthcare utilization, with a greater number of outpatient visits, emergency room visits, and hospitalizations than those without the disorder (8,10,15).

Individuals with panic disorder typically present to the primary care setting, with estimates suggesting that as many as 80% of cases first present to primary care (16). Thus, the rate of the disorder is higher in primary care settings, with a reported median prevalence of 4% to 6% (8). Furthermore, the majority of individuals with panic disorder obtain their mental

health treatment in the primary care setting (17,18). Despite these findings, research suggests that panic disorder often goes unrecognized (19,20), and inadequately treated in both primary care (8,21-23) and psychiatric settings (24-26).

A number of effective pharmacologic treatments for panic disorder exist, including tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), and benzodiazepines (27-30). Likewise, psychosocial treatments, namely cognitive-behavioral therapy (30,31) and possibly a specific form of psychoanalytic treatment (32), have been found to be effective. Despite this, estimates suggest that over 40% of individuals with panic disorder go untreated (33). Certain demographic (e.g., gender, education, race) and clinical variables (e.g., comorbid diagnoses) appear to be related to mental health service utilization in general (34-36). Additionally, there may be other factors that impact service utilization, such as not perceiving oneself in need of treatment (37). For individuals with panic disorder who do receive treatment, little is known about the treatment typically received, and no studies have examined whether there are differences in treatment between those with panic disorder with versus without agoraphobia.

This study uses data from the Primary Care Anxiety Project (PCAP), which is a naturalistic, longitudinal study of anxiety disorders in primary care patients. The purpose of the current study was to explore characteristics of psychiatric treatment received by those with panic disorder with versus without agoraphobia, including the rates of receiving different psychotropic medications and specific psychotherapeutic techniques. This study also sought to examine demographic and clinical predictors of receiving psychotropic medications, psychotherapy, and concurrent medication and therapy. Finally, this study provides descriptive information concerning reasons for not receiving treatment.

Method

Participants

The current study was part of the Primary Care Anxiety Project (PCAP), a naturalistic, longitudinal study of anxiety disorders in primary care patients. Participants were recruited from 15 primary care, internal medicine, and family medicine clinics in New England, which included 10 sites in urban or suburban areas and five in rural areas, with four of the sites being in small, private practices, four in university affiliated clinics, and seven in large teaching hospitals. Participant recruitment occurred between July 1997 and May 2001.

The entire PCAP sample consists of 539 participants with one or more of the following index anxiety disorders: generalized anxiety disorder, panic disorder with or without agoraphobia, agoraphobia without a history of panic disorder, posttraumatic stress disorder, social phobia, mixed anxiety-depressive disorder, or generalized anxiety disorder features occurring within a mood disorder. Inclusion criteria required participants to be English-speaking, at least 18 years of age, and scheduled for a medical appointment on a day of study recruitment. Participants were excluded for active psychosis, current pregnancy, or no current address or telephone number. The current study reports data from 235 individuals with panic disorder with (N=150) or without agoraphobia (N=85) at intake.

Procedure

Research assistants approached all patients in primary care waiting rooms during times of recruitment and asked if they were interested in participating in a study of stress or nervousness. The number of days per week, particular days of the week, and times of the day for study recruitment varied based on the availability of research assistants. A complete description of the study was provided to potential participants and written informed consent

was obtained. PCAP was approved by the institutional review board of Brown University and all other sites. Of the 14,320 patients who were approached, 31% (N=4383) were interested in participating and completed the anxiety screening questionnaire. Of those who completed the questionnaire, 63% (N=2755) screened positive for anxiety symptoms. These individuals were then invited to participate in an intake assessment, which included the Structured Clinical Interview for DSM-IV (SCID-IV) (38). Of those invited to complete the intake assessment, 456 declined participation and 665 repeatedly cancelled or failed to show up to the appointment. Thus, the SCID-IV was administered to a total of 1634 individuals, with those who had one or more index disorder being invited to participate in PCAP (39,40). After the intake assessment, participants were contacted to complete follow-up assessments at 6 months, 12 months, and annually thereafter.

Measures

Anxiety screening questionnaire—The anxiety screening questionnaire, which was developed specifically for PCAP, is a self-report instrument containing 32 items assessing essential features of anxiety disorders. It was designed to be highly sensitive to the presence of any anxiety disorder symptoms in order to reduce the number of false negatives. In a separate validation study of this measure, it was found to have sensitivity of 1.0 and a specificity of .67, with no individuals who screened negative on the questionnaire being found to have an anxiety disorder on the SCID-IV (39).

Diagnostic clinical interview—All psychiatric diagnoses were established by means of an in-person diagnostic interview using the SCID-IV (38). The SCID-IV is a well-validated assessment instrument that has been found to have excellent interrater reliability and diagnostic accuracy (41). For PCAP, participants first completed the psychotic screener followed by the anxiety disorders module. Participants who received an anxiety diagnosis then completed the mood, alcohol and substance use, and eating disorders modules. As part of the interview, Global Assessment of Functioning (GAF) scores were assigned. All interviewers had at least a bachelor's degree in psychology and underwent a rigorous, multistage training program employed in other large-scale studies conducted through the Brown Department of Psychiatry and Human Behavior.

Mental health treatment—Information regarding psychotropic medication usage was obtained using the Psychotropic/Auxiliary Drug Treatment Schedule, which is an interviewer-administered form about current medications. It is part of the Longitudinal Interval Follow-up Evaluation (LIFE) (42), which has been found have excellent interrater reliability and long-term test-retest reliability (43). Participants were asked about psychotherapy currently being received using the Types of Mental Health Treatment form, which is an interviewer-administered measure developed for PCAP that assesses involvement in various types of psychosocial treatments. Information regarding specific therapeutic techniques utilized was obtained using the Psychosocial Treatment Interview-Revised (PTI-R) (44). The PTI-R, an interviewer-administered measure, assesses whether 39 techniques have been utilized in their therapy. It includes a number of therapy techniques, including supportive, dynamic (e.g., discuss childhood experiences, patient-therapist relationship), family systems (e.g., examine problems from a systemic approach, change family interactions), relaxation, exposure (e.g., imaginal, interoceptive, in vivo), and cognitive therapy techniques (e.g., identify dysfunctional thinking, substitute more rational thoughts). The PTI-R has been found to have good interrater reliability and validity (44).

Treatment not received—For those not receiving treatment at intake, interviewers administered the Treatment Not Received form, which was designed specifically for PCAP. This measure was added to the intake assessment part way through the recruitment phase;

therefore, only a subset of participants were administered this measure. Furthermore, this measure was only administered to the patients, not to their providers. For those patients who were not receiving psychotropic medication, it inquires about reasons for not seeking medication, and for those not seeking psychotherapy, it inquires about reasons for not receiving therapy. Reasons were coded by the interviewer into the following categories: doctor did not recommend treatment, financial reasons, lack of insurance coverage for treatment, treatment ineffective in the past, patient does not believe he/she has a problem, patient does not believe in using this treatment for emotional problems, too busy to seek treatment or treatment is inconvenient, worried about treatment record, concerns about stigma or embarrassment, not knowing how to obtain treatment, and concerns about medication side effects.

Statistical Analyses

Analyses were conducted using SAS version 9.1.3 (45). Descriptive statistics were used to examine characteristics of psychiatric treatment received by those with panic disorder with and without agoraphobia, in addition to reasons for not receiving treatment. Comparisons between the panic disorder with and without agoraphobia groups were made using chisquare statistics and t-tests. Logistic regression analyses were used to examine predictors of receiving psychotropic medication, psychosocial treatment, and concurrent medication and therapy.

Results

Sample characteristics

At intake, 150 participants were diagnosed with panic disorder with and 85 without agoraphobia. Table 1 displays the demographic and clinical characteristics of the sample at intake. No significant differences were found between the groups on any demographic variables. However, in terms of clinical variables, the panic disorder with agoraphobia group had an earlier age of panic disorder onset (t = 1.98, df = 233, p < .05) and lower GAF scores (t = 2.96, df = 233, p < .01), which is indicative of worse functioning and/or more severe symptoms. The panic disorder with agoraphobia group also had higher rates of social phobia (2 = 5.19, df = 1, p < .05) and a greater number of comorbid anxiety disorder diagnoses (t = -2.15, df = 233, p < .05).

Treatment Received and Characteristics of Treatment Received

Over half of those with panic disorder (N=145; 62%) were receiving psychiatric treatment at intake, with those with agoraphobia being more likely to be in treatment than those without agoraphobia (2 = 21.1, df = 1, p < .001). Table 2 displays the frequencies and characteristics of treatment received at intake. Significantly more patients with panic disorder with agoraphobia were receiving psychotropic medication at intake (2 = 20.05, df = 1, p < .001). In particular, more patients with panic disorder with agoraphobia were receiving benzodiazepines (2 = 20.95, df = 1, p < .001). SSRIs/SNRIs were the most commonly received psychotropic medication for both groups. More specifically, the most common SSRIs/SNRIs were: sertraline (N=27; mean dose= 84.37±58.78), paroxetine (N=21; mean=23.95±19.82), fluoxetine (N=19; mean=31.05±16.63), and venlafaxine (N=4; mean=243.75±166.30), all of which have FDA approval for treatment of panic disorder (46). A subset of patients receiving medication (N=87; 66%) were asked about medication adherence, with 15% (N=13) reporting that they had taken their medication less frequently or at a lower dosage than prescribed.

In terms of psychotherapy, patients with panic disorder with agoraphobia were more likely to be receiving psychotherapy ($^2 = 5.48$, df = 1, p = .02). More specifically, patients with

panic disorder with agoraphobia were more likely to be receiving supportive ($^2 = 5.19$, df = 1, p = .02), psychodynamic ($^2 = 3.86$, df = 1, p = .05), exposure ($^2 = 7.9$, df = 1, p < .01), and cognitive therapy techniques ($^2 = 4.79$, df = 1, p < .05). For both groups, supportive therapy techniques were the most commonly received while exposure therapy was one of the least frequently received interventions. In terms of concurrent medication and psychotherapy, those with panic disorder with agoraphobia were more likely to be receiving such treatment ($^2 = 5.70$, df = 1, p = .02).

Predictors of treatment

A series of logistic regression analyses were conducted to examine demographic and clinical predictors of receiving psychotropic medication, psychotherapy, and concurrent medication and therapy at intake. Demographic variables, including age, gender, race, marital status, education, and insurance, along with clinical variables (presence of agoraphobia, age of panic disorder onset, number of comorbid anxiety diagnoses, and comorbid major depressive disorder) were included as predictors. Table 3 displays the results of these analyses, including the tests of the full models, as well as the regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for significant predictors. In terms of pharmacologic treatment, results showed that Non-Hispanic Caucasians were more likely to be receiving such treatment. Furthermore, those with agoraphobia were over three times as likely and those with comorbid major depressive disorder were twice as likely to receive medication. The only significant predictor of receiving psychotherapy was having Medicare/ Medicaid/Public assistance insurance, with those with Medicare/Medicaid/Public assistance insurance being more likely to receive therapy. In terms of concurrent medication and therapy, those who had at least a 4-year college degree were five times as likely to be receiving such treatment.

Reasons for Not Seeking Psychiatric Treatment

Data from the Treatment Not Received form were available on 53 patients not receiving medication and 85 not receiving psychotherapy at intake. No significant differences were found between the panic disorder with and without agoraphobia groups on reasons for not seeking treatment; thus responses were collapsed across groups and are displayed in table 4. The most commonly reported reasons for not seeking pharmacotherapy were: not believing in using medication for emotional problems, lack of recommendation by primary care provider, and concern about side effects. For psychotherapy, the most common reasons were: not believing that one has a problem, not believing in using psychotherapy for emotional problems, and perceiving treatment to be inconvenient and/or being too busy for treatment.

Discussion

Despite the degree of impairment and disability typically associated with panic disorder, the current study found that 38% of primary care patients with the disorder were not receiving psychiatric treatment. These results are fairly consistent with previous studies that have found 27-37% of individuals with panic disorder do not receive treatment (8,18,33,47). The non-treatment rate in the current study was much higher for patients with panic disorder without agoraphobia. Furthermore, the current study revealed a number of notable differences between treatments received by those with versus without agoraphobia, which has not been closely examined in prior studies.

Over half (56%) of primary care patients with panic disorder were receiving psychotropic medication, with those with agoraphobia being much more likely (67%) than those without agoraphobia (37%) to be receiving medication. These rates are comparable to those reported

in other studies in primary care settings (42-64%) (8,22,48). The most commonly received psychotropic medication for both groups were SSRIs/SNRIs, with over 34% of the sample using a SSRI/SNRI. The mean SSRI/SNRI doses reported were at or above the suggested therapeutic doses (46), except for with paroxetine, which was below the suggested therapeutic dose. It is unclear whether those on paroxetine were in fact receiving an inadequate dose, or if instead, these individuals had not yet titrated up to the suggested therapeutic dose. Significantly more patients with agoraphobia (35%) were receiving benzodiazepines than those without agoraphobia (8%), with 26% of whole sample using such a medication. This rate is higher than past findings in primary care patients with panic disorder (7-17%) (8,22). Given the variability in how benzodiazepines are utilized, the mean dose in the current sample was not determined; therefore, it is unclear whether such medications were being used at the suggested dose and/or in the appropriate manner determined to be efficacious. Other medications, such as TCAs and other anti-anxiety medications (e.g., buspirone, meprobamate), were used infrequently.

Results showed that those with agoraphobia (39%) were more likely to be receiving psychotherapy than those without agoraphobia (24%). Among both groups though, psychotherapy was underutilized, with only 33% of the sample as a whole receiving therapy at the time of intake. These rates are in line with previous studies, which have found that only 27-44% of primary care patients with the disorder receive therapy (8,17,48). These findings suggest that medications are the first line of treatment. The most commonly received psychotherapeutic techniques for both groups in the current study were supportive and psychodynamic techniques. Despite empirical evidence supporting the efficacy of CBT for panic disorder (30,31), cognitive-behavioral techniques were infrequently utilized, with only 15% of those without agoraphobia and 28% of those with agoraphobia receiving cognitive techniques, and even fewer receiving exposure. These findings are similar to past research that has shown that CBT is underutilized (24,48), suggesting a need for better treatment dissemination. Furthermore, making such interventions more accessible to primary care patients and adapted to their particular needs may be beneficial.

A number of factors predicted likelihood of receiving psychiatric treatment. Those with agoraphobia were over three times as likely to receive medication, which is not surprising given that agoraphobia is associated with greater disturbance (49) and may be more likely to be detected and treated. Comorbid major depressive disorder increased the odds of receiving medication, which has also been found in previous studies on panic disorder and anxiety disorders in general (23,48). It is possible that primary care providers are more familiar with depressive symptoms and their treatment, making it more likely that patients with comorbid depression receive medication. The results also showed that ethnic minorities were less likely to be receiving medication, which is consistent with other studies (23,48). It is unclear whether these findings are due to differences in patient treatment preferences or biases on the part of the treatment provider. Surprisingly, having Medicare/Medicaid/Public assistance insurance was the only significant individual predictor of receiving psychotherapy. It is possible that these patients have worse functioning than those with private insurance, while having greater means to pay for services than those with no insurance, which could lead to increased likelihood of using therapy. It is also possible that these patients were enrolled in public mental health programs and receiving therapy from a social worker or case worker in such programs. Education level predicted likelihood of receiving concurrent medication and therapy, with those who had a 4-year college degree or more being over five times as likely to be receiving such treatment. Past studies have also found a relationship between education level and greater mental health service utilization (33,50,51). One explanation for this finding is that education is often related to socioeconomic status, and therefore, those with higher education levels may be more likely to have the resources to pay for services. It

is also possible that those with higher education levels may have better access to the available services and/or different views about treatment.

Primary care patients with panic disorder reported several barriers to seeking treatment, including not believing in using medication/therapy for emotional problems and not receiving a recommendation by one's primary care provider. Some patients were also concerned about medication side effects and/or felt psychotherapy was inconvenient. Although these findings highlight the importance of providers making treatment recommendations, it appears that the majority of treatment barriers lie within the patient. Thus interventions aimed at addressing these barriers, such as providing patient education about the disorder and effective treatment options, may be beneficial.

A number of limitations should be considered when interpreting the findings. The sample was primarily female and Caucasian, and data collection occurred in only one geographic region of the United States. Future studies should include sites in other regions and a more diverse sample. Another consideration is that our assessment of psychiatric treatment did not specify the symptoms for which the patient was receiving treatment. It is possible that the focus of treatment may have been on comorbid conditions. Indeed the sample does have high rates of comorbidity; however these rates are comparable to those reported in other research (18). No retrospective information was obtained from participants on the length of time on a particular medication prior to intake. Furthermore, we only obtained limited medication adherence data that was self-report in nature. Thus, it is possible that although a proportion of the sample was receiving treatment known to be effective, they may not have received the treatment for an adequate duration of time and/or they may have had low treatment adherence. Although reasons for not receiving treatment were examined, data were only obtained from patients, and only from a subset of the sample, since this measure was added part way through the study. Therefore, the study did not examine providers' reasons for not using particular treatments. So it is unclear whether these findings would have differed had data been available from the providers and from the whole sample. Future research should attempt to elucidate these issues.

Conclusions

The findings suggest that there are a number of differences in the treatment received by primary care patients with panic disorder with versus without agoraphobia. Across the board, many patients with panic disorder are not receiving psychiatric treatment. When treatment is received, psychotropic medication, particularly SSRIs/SNRIs for those with either panic disorder with or without agoraphobia, and benzodiazepines for those with agoraphobia, appears to be the treatment of choice. Psychotherapy is underutilized for both groups, and for those who do receive therapy, empirically-supported interventions, such as CBT, are rarely utilized. A number of treatment barriers were identified that could potentially be addressed by providers. Overall, the findings suggest a need for better treatment dissemination, making interventions more accessible and/or adapting them to the needs of this population, and addressing treatment barriers.

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Table 1 Demographic and Clinical Characteristics of Patients With Panic Disorder With or Without Agoraphobia at Intake

	Panic Disorder without Agoraphobia (n = 85)		Panic Disorder with Agoraphobia (n = 150)	
Variables	N	%	N	%
Female	70	82	122	81
Age (M±SD)	38.3±11.8		39.7±10.3	
Race				
Caucasian	71	84	126	84
African American	10	12	7	5
Hispanic	1	1	6	4
Other	3	3	11	7
Marital Status				
Never married	22	26	38	25
Married/cohabitating	45	53	76	51
Separated/divorced/widowed	18	21	36	24
Highest level of education				
< High school graduate	7	8	23	15
High school graduate	22	26	49	33
Some college/associate's degree	44	52	61	41
4-year degree or more	12	14	17	11
Insurance status				
No insurance	8	10	15	10
Medicare/Medicaid/Public assistance	18	21	54	36
Private insurance	55	65	73	49
Both Medicare/Medicaid/Public assistance and private insurance	3	4	7	5
Age of panic disorder onset (M±SD)*	29.9±12.7		26.6±11.8	
Number of other anxiety diagnoses (M±SD)*	0.9±.9		1.22±1.1	
Comorbid disorders				
Generalized anxiety disorder	14	16	33	22
Social phobia *	16	19	49	33
Posttraumatic stress disorder	27	32	49	33
Specific phobia	15	18	38	25
Obsessive-compulsive disorder	6	7	14	9
Major depressive disorder	36	42	68	45
Alcohol/substance use disorder	8	9	20	13
Global Assessment of Functioning (M±SD)**	57.8±8.8		54.2±9.1	

p < .05

^{**} p < .01

Table 2 Characteristics of Treatment Received by Patients With Panic Disorder With or Without Agoraphobia at Intake

	Panic Disorder without Agoraphobia (n = 85)		Panic Disorder with Agoraphobia (n = 150)	
Treatment	N	%	N	%
Any psychiatric treatment ***	36	42	109	73
Any psychotropic medication **	31	37	100	67
SSRIs/SNRIs	25	29	56	37
TCAs	5	6	14	9
Benzodiazepines ***	7	8	53	35
Other anti-anxiety medication	1	1	6	4
Any psychotherapy *	20	24	57	39
Supportive *	20	24	56	38
Dynamic*	16	19	45	31
Family systems	16	19	37	25
Relaxation	8	9	25	17
Exposure therapy ***	6	7	31	21
Cognitive therapy *	13	15	41	28
Psychotropic medication + psychotherapy *	15	18	48	32

p < .05

^{***} p < .001

 ${\bf Table~3} \\ {\bf Significant~Demographic~and~Clinical~Predictors~of Receiving~Specific~Treatments~Among~Patients~With~Panic~Disorder~With~or~Without~Agoraphobia}^a$

Treatment	Overall 2	Predictor		Wald ²	Odds Ratio	95% CI
Medication	53.58***	Caucasian	1.01	4.64*	2.74	1.10 to 6.87
		Agoraphobia	1.17	13 29 ***	3.24	1.72 to 6.08
		Major depressive disorder	.70	4.41*	2.02	1.05 to 3.91
Psychotherapy	26.58*	Medicare/Medicaid/Public assistance	1.43	5.08*	4.18	1.21 to 14.49
Concurrent medication and therapy	36.62**	4-year college degree or more	1.61	5.32*	5.02	1.28 to 19.78

^aAll analyses included the following predictors: age, gender, race/ethnicity (Non-Hispanic Caucasian or other), marital status (never married, married, or separated/divorced/widowed), education (less than high school graduate, high school graduate, some college/associate's degree, or at least a 4-year college degree or more), insurance status (none, Medicare/Medicaid/Public assistance, private, or both Medicare/Medicaid/Public assistance and private), presence of agoraphobia, age of panic disorder onset, number of comorbid anxiety disorders, and current major depressive disorder. Only significant predictors are shown. For all analyses, df=15.

^{*} p<.05

^{**} p<01

^{***} p<.001

 ${\bf Table~4} \\ {\bf Reasons~For~Not~Receiving~Psychiatric~Treatment~for~a~Subset~of~Patients~With~Panic~Disorder~With~or~Without~Agoraphobia}^a$

	Frequency of endorsing reasons for not receiving treatment			
	Pharmacotherapy (n=53)		Psychotherapy (n=85)	
Reasons	N	%	N	%
Didn't believe in treatment for emotional problems	21	40	19	22
Primary care provider didn't recommend	19	36	15	18
Concerned about side effects	10	19	NA	NA
Didn't believe he/she had a problem	9	17	21	25
Treatment is inconvenient/too busy for treatment	5	9	16	19
Didn't know how to obtain treatment	2	4	3	4
Financial reasons	1	2	14	16
Treatment had been ineffective in the past	2	4	12	14
Worried about stigma/embarrassment	2	4	12	14
Concerned about record of treatment	1	2	4	5
Insurance doesn't cover treatment	0	0	6	7

^aData were only available for a subset of participants