Data Supplement for McGrath et al., The Bidirectional Associations Between Psychotic Experiences and DSM-IV Mental Disorders. Am J Psychiatry (doi: 10.1176/appi.ajp.2016.15101293)

TABLE S1. World Mental Health (WMH) sample characteristics by World Bank income categories, and sample for psychotic experiences (PEs).

Country by income category	Sample characteristics [a]	Field dates	Age range	Sample size		Response rate[b]
				Part I	PEs sample	
Low and lower middle income countries						
Colombia	All urban areas of the country	2003	18-65	4426	722	87.7
Iraq	Nationally representative	2006-7	18-96	4332	4329	95.2
Nigeria	21 of the 36 states in the country	2002-3	18-100	6752	1417	79.3
Peru	Nationally representative	2004-5	18-65	3930	530	90.2
PRC[c] - Shenzhen[d]	Shenzhen metropolitan area	2006-7	18-88	7132	2468	80.0
Upper-middle income countries						
Brazil - São Paulo	São Paulo metropolitan area	2005-7	18-93	5037	2922	81.3
Lebanon	Nationally representative	2002-3	18-94	2857	1029	70.0
Mexico	All urban areas of the country	2001-2	18-65	5782	715	76.6
Romania	Nationally representative	2005-6	18-96	2357	2357	70.9
High-income countries						
Belgium	Nationally representative	2001-2	18-95	2419	319	50.6
France	Nationally representative	2001-2	18-97	2894	301	45.9
Germany	Nationally representative	2002-3	18-95	3555	408	57.8
Italy	Nationally representative	2001-2	18-100	4712	617	71.3
New Zealand[d]	Nationally representative	2003-4	18-98	12790	7263	73.3
Portugal	Nationally representative	2008-9	18-81	3849	2053	57.3
Spain	Nationally representative	2001-2	18-98	5473	1159	78.6
The Netherlands	Nationally representative	2002-3	18-95	2372	348	56.4
The United States	Nationally representative	2002-3	18-99	9282	2304	70.9
All countries combined				**89951**	**31261**	**72.1**

[a] NSMH (The Colombian National Study of Mental Health); IMHS (Iraq Mental Health Survey); NSMHW (The Nigerian Survey of Mental Health and Wellbeing); EMSMP (La Encuesta Mundial de Salud Mental en el Peru); LEBANON (Lebanese Evaluation of the Burden of Ailments and Needs of the Nation); M-NCS (The Mexico National Comorbidity Survey); RMHS (Romania Mental Health Survey); ESEMeD (The European Study Of The Epidemiology Of Mental Disorders); NZMHS (New Zealand Mental Health Survey); NMHS (Portugal National Mental Health Survey); NCS-R (The US National Comorbidity Survey Replication).

[b] The response rate is calculated as the ratio of the number of households in which an interview was completed to the number of households originally sampled, excluding from the denominator households known not to be eligible either because of being vacant at the time of initial contact or because the residents were unable to speak the designated languages of the survey. The weighted average response rate is 72.1%.

[c] People's Republic of China.

[d] For the purposes of cross-national comparisons we limit the sample to those 18+.

TABLE S2a. Psychotic experiences questions in six European (ESEMed[1]) sites (Belgium, France, Germany, Italy, Netherlands, Spain)

Type 1. (Saw a vision)

Did you ever see something that wasn't really there that other people could not see? Please do not include any times when you were dreaming or half-asleep or under theinfluence of alcohol or drugs.

Type 2. (Heard voices)

Did you ever hear things that other people said did not exist, like strange voices coming from inside your head talking to you or about you, or voices coming out of the air when there was no one around. Please do not include any times when you were dreaming or half-asleep or under the influence of alcohol or drugs.

Type 3. (Thought insertion)

Did you ever believe that some mysterious force was inserting many different strange thoughts -- that were definitely not your own thoughts – directly into your head by means of x-rays or laser beams or other methods?

Type 4. (Mind control/passivity)

Did you ever feel that your mind had been taken over by strange forces with laser beams or other methods that were making you do things you did not choose to do. Again, do not include times when you were dreaming or under the influence of alcohol or drugs.

Type 5. (Ideas of reference)

Did you ever believe that some strange force was trying to communicate directly with you by sending special signs or signals that you could understand but that no one else could understand. Sometimes this happens by special signs coming through the radio or television.

Type 6. (Plot to harm /follow)

Did you ever believe that there was an unjust plot going on to harm you or to have people follow you that your family and friends did not believe existed?

[1] ESEMeD = European Study of the Epidemiology of Mental Disorders

TABLE S2b. CIDI Psychotic experiences questions in 12 non-ESEMed sites (People's Republic of China, Colombia, Lebanon, Mexico, Brazil, Iraq, New Zealand, Nigeria, Peru, Portugal, Romania, USA)

Type 1.　　(Saw a vision)
　　　　Did you ever see something that other people who were there could not see?
In case previous question answered positively
Type 1a.　(Saw a vision)Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Type 2.　　(Hearing voices)
　　Did you ever hear things that other people said did not exist, like strange voices coming from inside your head talking to you or about you, or voices coming out of the air when there was no one around.

Type 2a.　(Hearing voices)
　　Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Type 3.　　(Thought insertion)
　　Did you ever believe that some mysterious force was inserting many different strange thoughts -- that were definitely not your own thoughts – directly into your head by means of x-rays or laser beams or other methods?

Type 3a.　(Thought insertion)
　　Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Type 4.　　(Mind control/passivity)
　　Did you ever feel that your mind had been taken over by strange forces with laser beams or other methods that were making you do things you did not choose to do.

Type 4a.　(Mind control/passivity)
　　Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Type 5.　　(Ideas of reference)
　　Did you ever believe that some strange force was trying to communicate directly with you by sending special signs or signals that you could understand but that no one else could understand. Sometimes this happens by special signs coming through the radio or television.

Type 5a.　(Ideas of reference)
　　Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Type 6.　　(Plot to harm /follow)
　　Did you ever believe that there was an unjust plot going on to harm you or to have people follow you that your family and friends did not believe existed?

Type 6a.　(Plot to harm /follow)
　　Did this every happen when you were not dreaming, not half-asleep, and not under the influence of alcohol or drugs?

Note: For the assessment of psychotic experiences we included items 1a, 2a, 3a, 4a, 5a, and 6a. Similarly for the assessment of hallucination types we included types 1a and 2a, and for the assessment of delusional experiences we included types 3a, 4a, 5a, and 6a.

TABLE S3. Mean, median and interquartile range of age of onset distributions with and without imputed cases of psychotic experiences.

Country	Without imputed cases				With imputed cases			
	n[a]	Mean	SE (Mean)	Median (IQR)	n[a]	Mean	SE (Mean)	Median (IQR)
Low-lower middle income countries	**319**	**20.7**	**1.2**	**17(12-25)**	**350**	**20.6**	**1.0**	**17(12-24)**
Colombia	71	23.7	2.5	20(12-32)	73	23.7	2.4	21(13-31)
Iraq	40	31.1	4.6	22(18-42)	51	28.3	3.6	22(18-32)
Nigeria	35	21.4	1.8	19(10-26)	39	21.5	1.7	19(12-26)
Peru	35	21.0	2.4	19(13-23)	36	21.1	2.4	19(13-23)
PRC Shen Zhen	138	15.6	0.9	15(9-19)	151	15.9	0.8	15(10-19)
Upper-middle income countries	**565**	**25.2**	**1.1**	**20(14-34)**	**662**	**25.6**	**1.0**	**22(15-33)**
Brazil	458	25.2	1.2	21(14-34)	548	25.5	1.2	22(15-32)
Lebanon	35	32.5	3.7	28(17-47)	37	32.4	3.6	28(17-47)
Mexico	53	20.9	3.2	18(7-29)	53	20.9	3.2	18(7-29)
Romania	19	25.7	3.2	19(14-28)	24	26.2	2.9	19(14-29)
High income countries	**1310**	**24.9**	**0.7**	**20(12-34)**	**1373**	**24.9**	**0.7**	**20(13-34)**
Belgium	28	34.4	5.4	38(17-45)	32	34.2	5.2	37(17-45)
France	25	26.8	6.5	20(8-36)	27	27.6	6.2	23(11-38)
Germany	23	27.9	3.3	21(10-39)	25	27.9	3.2	21(10-38)
Italy	38	30.6	4.2	25(12-43)	38	30.6	4.2	25(12-43)
New Zealand	695	23.5	0.9	19(12-33)	724	23.5	0.9	20(13-32)
Portugal	125	24.8	2.4	21(14-35)	140	24.8	2.3	21(14-34)
Spain	89	26.0	3.9	16(12-30)	91	26.0	3.8	17(12-30)
The Netherlands	46	20.3	3.2	16(9-20)	47	21.0	3.2	18(9-21)
The United States	241	26.3	1.7	22(12-35)	249	26.2	1.7	22(13-35)
All countries combined	**2194**	**24.3**	**0.6**	**19(13-32)**	**2385**	**24.4**	**0.5**	**20(13-32)**

Number of missing age of onset : 191

TABLE S4. Associations between lifetime psychotic experiences (PEs) and the subsequent onset of DSM-IV mental disorders.

Type of mental disorders	Bivariate models[a]				Multivariate models[b]										Joint effects of all number of disorders	
	Odds of disorder		Odds of disorder		2 disorders		3 disorders		4 disorders		5+ disorders					
	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I			χ^2_4	p
I. Mood disorders																
Major depressive disorder with hierarchy	1.6*	1.4-1.9	1.3*	1.2-1.5	0.5*	0.4-0.7	0.3*	0.2-0.3	0.1*	0.1-0.1	-	-			169.5**	<.001
Bipolar disorder (broad)	2.7*	2.0-3.5	2.0*	1.5-2.6	1.2	0.8-1.8	1.1	0.6-2.0	0.6	0.3-1.3	0.1*	0.0-0.5			40.7**	<.001
II. Anxiety disorders																
Panic disorder	2.0*	1.5-2.8	1.3	0.9-1.8	1.0	0.6-1.5	0.5*	0.3-1.0	0.3*	0.1-0.7	0.1*	0.0-0.3			27.4**	<.001
Generalized anxiety disorder with hierarchy	1.9*	1.5-2.4	1.4*	1.1-1.8	0.7	0.5-1.0	0.3*	0.2-0.5	0.2*	0.1-0.4	0.0*	0.0-0.1			39.3**	<.001
Social phobia	2.0*	1.5-2.7	1.4*	1.0-1.8	0.7	0.5-1.0	0.4*	0.2-0.7	0.2*	0.1-0.4	0.0*	0.0-0.2			30.5**	<.001
Specific phobia	1.0	0.7-1.5	0.9	0.6-1.3	0.5*	0.3-0.7	0.4*	0.2-0.8	0.2*	0.1-0.5	0.0*	0.0-0.2			18.7**	0.001
Agoraphobia without panic	2.0*	1.2-3.4	1.2	0.7-2.1	0.5*	0.3-0.9	0.1*	0.0-0.3	0.1*	0.0-0.4	0.0*	0.0-0.1			22.2**	<.001
Post-traumatic stress disorder	2.0*	1.6-2.6	1.3*	1.1-1.7	0.6*	0.4-0.8	0.3*	0.2-0.5	0.1*	0.1-0.2	0.0*	0.0-0.1			42.4**	<.001
Separation anxiety disorder (Child)	1.7	0.9-3.2	1.2	0.6-2.3	0.5*	0.2-1.0	0.4	0.1-1.3	0.1*	0.0-0.7	0.0*	0.0-0.4			8.4	0.079
Separation anxiety disorder (Adult)	2.7*	1.9-3.6	1.6*	1.2-2.2	0.7	0.5-1.2	0.4*	0.2-0.7	0.2*	0.1-0.5	0.1*	0.0-0.2			31.0**	<.001
III. Impulse-control disorders																
Intermittent explosive disorder with hierarchy	1.5*	1.1-2.1	1.2	0.9-1.6	0.4*	0.3-0.7	0.2*	0.1-0.3	0.0*	0.0-0.1	0.0*	0.0-0.1			40.7**	<.001
Attention deficit disorder	2.5	0.8-7.4	1.8	0.6-5.6	0.2*	0.1-0.5	0.0*	0.0-0.1	0.0*	0.0-0.1	-	-			36.9**	<.001
Oppositional defiant disorder with hierarchy	2.6*	1.2-5.7	2.1	0.9-5.0	0.4*	0.2-0.9	0.1*	0.0-0.2	0.0*	0.0-0.1	0.0*	0.0-0.1			28.8**	<.001
Conduct disorder	1.9	0.9-4.1	1.2	0.5-3.0	0.4*	0.2-0.8	0.1*	0.0-0.2	0.0*	0.0-0.0	0.0*	0.0-0.0			40.1**	<.001
IV. Eating disorders																
Anorexia nervosa	0.9	0.3-2.8	0.7	0.2-2.0	0.8	0.2-3.5	0.8	0.1-6.7	0.3	0.0-6.1	0.1	0.0-9.9			3.1	0.540
Binge eating disorder with hierarchy	1.7*	1.1-2.5	1.0	0.7-1.6	1.6	0.9-2.8	0.7	0.3-1.3	0.5	0.2-1.4	0.2	0.0-1.3			24.4**	<.001
Bulimia nervosa with hierarchy	3.2*	2.2-4.8	1.9*	1.2-3.1	1.2	0.6-2.2	1.0	0.4-2.5	0.6	0.2-2.1	0.3	0.1-1.6			8.6	0.071

TABLE S4 *continued*

Type of mental disorders	Bivariate models[a]				Multivariate models[b]										Joint effects of all number of disorders	
	Odds of disorder		Odds of disorder		2 disorders		3 disorders		4 disorders		5+ disorders					
	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I	OR	95% C.I	χ^2_4	p
V. Substance-use disorders														
Alcohol abuse with hierarchy	**1.7***	1.3-2.3	**1.4***	1.1-1.9	**0.5***	0.4-0.8	**0.3***	0.2-0.6	**0.1***	0.1-0.3	**0.0***	0.0-0.1	36.7**	<.001
Alcohol dependence	**1.9***	1.4-2.7	**1.1**	0.8-1.7	**0.8**	0.5-1.2	**0.4***	0.2-0.8	**0.2***	0.1-0.4	**0.0***	0.0-0.1	49.3**	<.001
Drug abuse with hierarchy	**1.9***	1.2-2.8	**1.4**	0.9-2.1	**0.6***	0.3-0.9	**0.3***	0.1-0.6	**0.1***	0.0-0.2	**0.0***	0.0-0.1	31.2**	<.001
Drug dependence	**2.3***	1.5-3.4	**1.4**	0.9-2.0	**0.9**	0.4-1.7	**0.4**	0.2-1.3	**0.2***	0.0-0.7	**0.0***	0.0-0.2	31.1**	<.001

*Significant at the .05 level, 2-sided test.

[a]Lifetime PEs was used as a predictor of mental disorder onset in separate discrete-time survival model controlling for age-cohorts, gender, person-years, country, time-varying education, time-varying marriage and employment status.

[b]Lifetime PEs was used as a predictor of mental disorder onset in separate discrete-time survival model including the controls specified above, other temporally primary mental disorders and number of temporally primary mental disorders (2,3,4 5+ disorders).