Regional Comparative Analysis of Status and Impact factors of Sexual Reproductive Health Treatment Services for Unmarried Youth in China

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Introduction

According to the data of Survey of Youth Access to Reproductive Health in China (YARHC), there were 0.196 billion unmarried youth aged 15-24 in 2009, and accounted for 14.96 of the total population.[1]The 1994 International Conference on Population and Development (ICPD) Programme of Action speaks specifically of the right of adolescents to reproductive health education, information and care.[2]This was further strengthened by UNFPA that "making 1 billion count: investing in adolescents' health and rights" in 2003[3]. With the international concept of" youth friendly services" proposed by WHO[4] public and private SRH services, SRH outpatient clinic, versatile center provide SRH services, and youth-friendly drug store, which especially for youth people were successively developed around the world. Presently, there were lots of researches focuses on youths' SRH knowledge, attitude and status of needs,[5][6][7][8]and a some of them addressed the SRH treatment needs[9][10], but few literature paid attention on the utilization of SRH medical services and its impact factors, especially treatment services. For the data limitation, there were no previous studies on this topic by using regional comparison analysis. This study will explore the status and impact factors of SRH treatment services for unmarried youth in different regions of China.

Data and method

This study used data from 2009 Survey of Youth Access to Reproductive Health in China (YARHC), the first nationally representative survey of unmarried youth on this topic. The target population were unmarried youth aged 15 to 24 living in 30 provinces/autonomous regions/municipalities of mainland China (excluding Tibet) and divided into three subpopulations: school youth, household youth, and youth living in collective households. The survey employed mixed sampling methods that combined stratified, multi-stage, and probability proportional to size sampling in the three subpopulations. The general refusal rate was 24.9%. There were 22288 respondents, with 50.3% being male.

SPSS16.0 software was used for statistical analysis. Descriptive analysis on frequency, percentage to describe unmarried youths general information and reproductive health treatment services was used. And comparison of the different characteristics of young people on sexual and reproductive health treatment services utilization by χ2 test (Chi-square test). Logistic regression analysis was used for impact factors analysis.

Measurement

Table 1 Variables definition

Variables	Definition
Gender	male=0, female=1
Age	"15-19"=1, "10-24"=2。
Residence place	Urban=0，Rural=1

EDU level	Middle school and below: yes =1, no=0; high school: yes=1,no=0; college and above: yes=1, no=0.
Have religious beliefs or not	yes=1, no=0
Only child in family	yes=1, no=0
Living with parents	yes=1, no=0
Migration	At school: yes=1，no=0;　family household: yes=1，no=0; migrants of collective household: yes=1，no=0。
Disposable income	"<2000": yes=1, no=0; "2000-5000": yes=1, no=0; "5000-10000": yes=1, no=0; ">10000": yes=1, no=0
Mother's EDU	Middle school and below: yes =1, no=0; high school: yes=1, no=0; college and above: yes=1, no=0.
Father's EDU	Middle school and below: yes =1, no=0; high school: yes=1, no=0; college and above: yes=1, no=0.
Sexual behavior experience	yes=1, no=0

Results

For the total sample size, the proportion of "at least one sexual and reproductive health problems require to get treatment" was 16.26%, the proportion of "at least once on a sexual and reproductive health of made use of treatment services" accounted for 9.3%, the achieve rate of requirement (ARR)was only 57.4%. ARR in Western China was the lowest compared with the Eastern and Middle China. Regression analysis showed that for total youth, unmarried youth with the characteristics of female, older age, non-religious beliefs, not only-child in family, and sexual experience were much easier to utilize SRH services. In Eastern China, unmarried youth with the characteristics of female, older age, non-religious beliefs and treatment of sexually experienced were much easier to utilize SRH services; in Middle China, unmarried youth with the characteristics of female, older age, sexually experience, youth not at school were much easier to utilize SRH services; and in Western China, unmarried youth with the characteristics of female, older age, non-religious beliefs were much easier to utilize SRH services.

Table 2 Comparison analysis of utilization of SRH treatment services of unmarried youths

region	At least one need				At least utilized one type of services				Achieve rate of treatment need (%)
	N	%	χ2	p	N	%	χ2	p	
Eastern China	1241	12.2	226.23	<0.01	709	7.00	123.63	<0.01	57.13
Middle China	979	14.0	38.91	<0.01	593	8.50	9.08	<0.01	60.57
Western China	1405	27.4	610.27	<0.01	779	15.2	272.12	<0.01	55.48
China	3625	16.26	—	—	2081	9.30	—	—	57.42

Table3　Comparison analysis of SRH treatment services utilization of unmarried youths by region

Items		Eastern China						Middle China						Western China					
		Utilized		Not utilized		χ2	p	Utilized		Not utilized		χ2	p	Utilized		Not utilized		χ2	p
		N	%	N	%			N	%	N	%			N	%	N	%		
Gender	male	210	4	5014	96	144.276	<0.01	142	4	3431	96	191.042	<0.01	183	7.3	2338	92.7	244.39	<0.01
	female	499	10.1	4447	89.9			452	13.2	2977	86.8			596	23	1999	77		
Age	15-19	244	4.7	493	95.3	89.012	<0.01	217	5.4	3838	94.6	120.784	<0.01	381	12.2	2734	87.8	55.366	<0.01
	20-24	465	9.4	4468	90.6			376	12.8	2571	87.2			398	19.9	1603	80.1		
Residence place	urban	395	7.1	5161	92.9	0.359	0.549	290	8.7	3025	91.3	0.672	0.428	296	14.5	1751	85.5	1.553	0.213
	rural	314	6.8	4300	93.2			303	8.2	3383	91.8			483	15.7	2586	84.3		
EDU level	Middle school and below	273	5.4	4739	94.6	35.416	<0.01	295	6.7	4140	93.3	52.202	<0.01	378	11.9	2803	88.1	72.212	<0.01
	high school	158	8.4	1722	91.6	7.300	0.04	139	12	1022	88	22.037	<0.01	219	22.6	750	77.4	50.355	<0.01
	college and above	278	8.5	3000	91.5	16.990	<0.01	160	11.4	1247	88.6	18.940	<0.01	181	18.8	784	81.2	11.598	<0.01
Have religious beliefs or no	yes	502	6.2	7592	93.8	36.189	<0.01	511	8.3	5629	91.7	1.406	0.239	558	12.9	3756	87.1	111.984	<0.01
	no	207	10	1869	90			82	9.5	779	90.5			221	27.6	581	72.4		
Only child in family	yes	359	6.8	4945	93.2	0.704	0.401	247	8	2826	92	1.314	0.252	207	12.1	1506	87.9	19.704	<0.01
	no	350	7.2	4516	92.8			346	8.8	3583	91.2			572	16.8	2831	83.2		
Living with parents	yes	669	7	8930	93	0.000	0.983	551	8.4	3583	91.6	0.674	0.426	747	15.4	4101	84.6	2.366	0.137
	no	40	7	532	93			42	9.5	6009	90.5			32	11.9	236	88.1		
Migration	At school	279	6	4406	94	13.604	<0.01	186	6	2910	94	43.413	<0.01	343	13.9	2133	86.1	7.015	<0.01
	family household	280	7.7	3357	92.3	4.614	0.018	292	10.8	2419	89.2	30.239	<0.01	353	16.2	1831	83.8	2.683	0.055
	migrants of collective household	150	8.1	1698	91.9	4.568	0.018	115	9.6	1080	90.4	2.477	0.066	82	18	373	82	3.062	0.048
Disposable income	<2000	74	5.3	1311	94.7	6.552	<0.01	97	5.1	1791	94.9	37.007	<0.01	146	12.1	1063	87.9	12.174	<0.01
	2000-5000	131	5.4	2276	94.6	11.358	<0.01	109	6.2	1658	93.8	16.134	<0.01	229	16.5	1158	83.5	2.495	0.063
	5000-10000	187	6.7	2589	93.3	0.301	0.307	154	10.6	1304	89.4	10.397	<0.01	171	14.6	1001	85.4	0.477	0.261
	>10000	317	8.8	3286	91.2	28.732	<0.01	233	12.3	1655	87.7	49.554	<0.01	232	17.2	1115	82.8	5.747	0.010
Mother's EDU	Middle school and below	451	7.4	5632	92.6	5.014	0.014	406	8.9	4139	91.1	2.760	0.052	533	14.3	3185	85.7	8.072	<0.01
	high school	195	6.4	2872	93.6	2.978	0.046	148	7.4	1845	92.6	3.288	0.038	183	18.3	815	81.7	9.398	<0.01

		n	%	n	%	χ²	p	n	%	n	%	χ²	p	n	%	n	%	χ²	p
	college and above	63	6.2	957	93.8	1.103	0.162	39	8.4	424	91.6	0.001	0.528	62	15.5	337	84.5	0.033	0.451
Father's EDU	Middle school and below	341	7.1	4493	92.9	0.099	0.392	344	9.2	3403	90.8	5.249	0.012	397	13.6	2526	86.4	14.292	<0.01
	high school	249	6.8	3412	93.2	0.227	0.332	188	7.6	2288	92.4	3.793	0.028	291	18.2	1312	81.8	15.491	<0.01
	college and above	118	7	1557	93	0.017	0.470	61	7.8	717	92.2	0.446	0.278	90	15.3	499	84.7	0.003	0.500
Sexual experience	no	684	6.9	9281	93.1	8.802	0.003	567	8.3	6279	91.7	16.004	<0.01	752	15.3	4148	84.7	1.299	0.254
	yes	25	12.2	180	87.8			27	17.3	129	82.7			27	12.5	189	87.5		

Table 4 Impact factors of SRH treatment services utilization by region

Impact factors	China		Eastern China		Middle China		Western China	
	B	OR	B	OR	B	OR	B	OR
Gender (male)	1.268	3.554	1.053	2.868	1.432	4.188	1.401	4.058
Age	0.176	1.193	0.194	1.214	0.177	1.196	0.183	1.200
Have religious beliefs or not (yes)	0.520	1.681	0.566	1.760	—	—	0.756	2.129
Sexual experience (yes)	0.518	1.679	0.673	1.691	0.935	2.546	—	—
Only child in family (yes)	0.110	1.116	—	—	—	—	0.219	1.245
Migration (At school)								
family household	0.369	1.447	0.214	1.239	0.331	1.392	0.151	1.163
migrants of collective household	0.250	1.283	0.068	1.070	0.363	1.483	-0.055	0.947
EDU (Middle school and below)								
high school	0.084	1.088	0.057	1.059	0.083	1.087	-0.035	0.965
college and above	0.333	1.395	0.150	1.162	0.147	1.158	0.237	1.267
Disposable income (<2000)								
2000-5000	-0.096	0.908	-0.053	0.948	-0.439	0.645	-0.117	0.889
5000-10000	0.015	1.015	-0.120	0.887	-0.334	0.715	0.246	1.279
>10000	-0.035	0.966	-0.016	0.984	-0.064	0.938	-0.080	0.923
Mother's EDU (Middle school and below)								
high school	-0.053	0.948	—	—	—	—	—	—
college and above	-0.077	0.926	—	—	—	—	—	—
Father's EDU (Middle school and below)								
high school	—	—	—	—	—	—	-0.547	0.579
college and above	—	—	—	—	—	—	-0.217	0.805
constant	-8.356	0.000	-8.424	0.000	-8.41	0.000	-7.749	0.000

$p<0.05$

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