

Beliefs and Attitudes towards Mental Illness: Comparative Study between Rural and Urban Male Adolescents in Beni-Suef Governorate

Aziza M. Abozeid¹, Eman N. Ramadan², Nagia I. Hassan³

¹Community Health Nursing, Beni-Suef University, Egypt.

e-mail: draziza55@gmail.com

²Community Health Nursing, Benha University, Benha, Egypt.

e-mail: dremannabil@yahoo.com

³Psychiatric Nursing and Mental Health, Faculty of Nursing, Damanhour University, Egypt.

e-mail: nagiagomaa@yahoo.com

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ABSTRACT

Contents: Community mental health literacy is important in dealing with mental illness to improve related attitudes and correct false beliefs.

Aim: To compare the beliefs and attitudes towards mental illness between rural and urban male adolescents in Beni-Suef Governorate.

Methods: A comparative cross-sectional study was carried out in governmental secondary schools for males in urban and rural areas in the Beni-Suef governorate. It included 360 adolescents from urban areas and 180 from rural areas selected from a random sample of ten schools in urban areas and five schools in rural areas. A self-administered questionnaire, including a scale for the Beliefs about Mental Illness and a scale for Attitude toward Mental Illness, was used for data collection. The fieldwork lasted from February to May 2019.

Results: The median age was 14.0 years in both groups, with more illiterate parents in the rural sample. Significantly adolescents from rural areas were aware of mental illness about two-thirds (66.1%) and had read about it (91.7%). Adolescents in both samples had low scores of stigma beliefs and negative attitudes towards mental illness. The adolescents in the urban sample had significantly higher total beliefs ($p=0.006$) and a negative attitude ($p=0.005$). A higher percentage of urban adolescents had high stigma belief (18.3%) and negative attitude (39.2%) compared to those in rural areas, 8.9%, and 29.4%, respectively. The multivariate analysis identified rural residence as an independent significant negative predictor of adolescent's stigmatization belief score.

Conclusion: Adolescents from urban or rural areas in Beni-Suef Governorate differ in their beliefs and attitudes towards mental illness, with more stigmatization among those from urban settings. School-based educational interventions are recommended to improve adolescents' attitudes towards mental illness, with studies evaluating their effectiveness.

Keywords: Mental illness, beliefs, attitudes adolescents, urban, rural

1. Introduction

Mental health is defined as "a dynamic state of internal equilibrium that enables individuals to use their abilities in harmony with society's universal values" (Galderisi et al., 2017). The definition underscores the importance of society's role or community in dealing with mental health and illness. Mental health literacy is the "knowledge and beliefs about mental disorders which helps in their recognition, management or prevention" (Loureiro et al., 2013).

The community mental health literacy is of utmost importance in dealing with mental illness to improve the attitudes and correct the false beliefs related to such illnesses (Tonsing, 2018). The high prevalence of misconceptions related to mental illness is often underlying the stigmatizing beliefs and attitudes often expressed towards these patients, thus deterring them from seeking professional help and consequently worsening their prognosis (Solmi et al., 2020). Hence, assessing the

stigmatizing beliefs and attitudes towards mental illness is crucial (Ma & Hsieh, 2020).

One in six people are aged 10-19 years globally; depression is one of the leading causes of illness and disability among adolescents. Suicide is the third leading cause of death in 15-19-year-olds. The consequences of not addressing adolescent mental health conditions extend to adulthood, impairing physical and mental health, and limiting opportunities to lead fulfilling lives as adults (World Health Organization, 2019).

Mental health and related beliefs, misconceptions, and attitudes are of particular importance in adolescence. In this phase of development, adolescents are exposed to complex combinations of external and internal factors influencing their physical, emotional, and social wellbeing, and are thus more vulnerable to mental health problems (Clancy, 2019). Moreover, adolescence tends to be critical, and this, with the lack of sound knowledge about mental health and illness, it may lead to their having more tendencies to negative and discriminant attitudes towards the mentally ill, known as stigma with its negative stereotypes' prejudices (Burnett 2019).

¹Corresponding author: Aziza Mahmoud Abozeid

Research on adolescents found that they are concerned about stigma, youth; especially the boys (Saraf et al., 2018). Moreover, stigma against mental illness often develops at a young age and is affected by community culture and norms (Pang et al., 2017). It can also be influenced by personal experience and the surrounding environment (Aflakseir et al., 2019). However, adolescents' beliefs and behaviors can be modulated and improved through school-based destigmatizing intervention programs (Hui et al., 2019).

2. Significance of the Study

In Egypt, 9.4% of the population aged 10-14 years and 9.7% are aged 15-19 years (United Nations International Children's Emergency Fund UNICEF, 2015; Ministry of Health and Population Egypt, 2015). Mental health research among adolescents in Egypt is still scarce. This scarcity is incredibly real for adolescents in Upper Egypt governorates. This study attempts to provide factual data about adolescents' beliefs and attitudes towards mental illness in urban and rural areas in one of Upper Egypt governorates. The information expected to be obtained could help design interventions that would correct their related misconceptions and improve their attitudes. Community mental health nursing would have a vital role in such interventions.

Additionally, in adolescents, psychiatric epidemiology is a relatively new research field and has become useful in the last three decades. However, epidemiological data on adolescent mental health problems in developing and Arab countries are limited (Liu et al., 2017; Al Makadma, 2017).

3. Aim of the study

This study aimed to compare the beliefs and attitudes towards mental illness between rural and urban male adolescents in Beni-Suef Governorate.

4. Subjects & Methods

4.1. Research design

A comparative cross-sectional design was utilized in carrying out the study, which is a type of descriptive study that does not emphasize relationships between variables. Their purpose is to discern, label, and manuscript features of the circumstances as it indeed occurs. Such research intends not to explain or understand the underlying causes of interest variables (Cannon & Boswell (2010).

4.2. Research setting

The study was conducted at governmental secondary schools for males in urban and rural areas in Beni-Suef governorate. Beni-Suef governorate is located in Upper Egypt, a significant geography constitution is rural areas, and diminutive urban as Beni-Suef city, constrained society in their cultural nature, farming is the main occupations of citizens. The population's mainstreams are low educated or illiterate and low to moderate socioeconomic status, whereas a minority of them are highly educated and have socioeconomic status.

4.3. Subjects

The study population consisted of adolescent school children attending governmental schools in urban and rural Beni-Suef Governorate. Adolescents were eligible for inclusion in the study sample to fulfill the inclusion criteria of being a permanent resident in Beni-Suef and enrolled in one of the governmental schools therein during the study.

The exclusion criteria were having medical problems or mental disabilities. A random sample of ten schools in urban areas and five schools in rural areas was selected. Then, from each school, one classroom was selected from each grade. Thus, 360 adolescents were selected from urban areas and 180 from rural areas. This sample size was large enough to demonstrate a difference between the attitude/beliefs scores of urban and rural adolescents with a moderate effect size at 95% level of confidence, study power 80%, and standard deviation 20.0, accounting for a non-response rate of about 10% (Hulley et al., 2013).

4.4. Tools of the study

4.4.1. Self-Administered Questionnaire

The researcher used a self-administered questionnaire, including a scale for the Beliefs about Mental Illness and a scale for Attitude toward Mental Illness for data collection. The tool had a section for respondent's socio-demographic data such as age, school grade, parents' education, job, and residence. This section was followed by a section assessing the respondent's awareness and experience with mental illness and related information sources.

4.4.2. Beliefs about Mental Illness Scale

This tool was modified and translated into Arabic by researchers from Hirai and Clum (2000) to assess adolescents' beliefs about mental illness. The original scale consisted of 40 items. The researchers omitted four items because they did not fit the current study's aim and added four items instead. Thus, the final version consisted of 40 items classified into five dimensions. The first dimension (10 items) measured the nature of the mental illness; the second (9 items) assessed the causes of mental illness as perceived by the respondent; the third (10 items) dealt with the methods of treatment of mental illness; the fourth (4 items) assessed the perception regarding curability of mental illness; the last (7 items) measured the effect of mental illness on patient's family.

Each item's response was on a 3-point Likert scale: "Disagree, agree, strongly agree," which were scored 0, 1, and 2, respectively. The scores of each dimension's items were summed-up, and the total converted into a standardized percent score for comparability among the various dimensions and between groups. Then, the five dimensions' scores were summed up with reverse scoring of the positive items so that a higher score indicates more negative or stigmatizing beliefs. For categorical presentation, a total belief score 60% or higher was considered high stigma belief, while a lower score was considered low stigma belief.

4.4.3. Attitude Toward Mental Illness Scale

The researchers adapted the Attitude toward the Mental Illness Scale from *Ng and Chan (2000)* attitude scale. The original scale consisted of 34 items and was used to assess mental illness attitudes among Chinese. It was translated with acculturation to suit the Egyptian context. Thus, 11 were modified, and eight items were omitted because of non-relevance to Egyptian culture, ending-up with a 26-item scale divided into five dimensions.

The first dimension (6 items) measured separatism, with items addressing the unpredictability of people with mental illness and the need to keep them away at a safe distance. The second dimension (2 items) measured stereotyping, such as defining people with mental illness in a specific behavioral pattern and mental ability. The third dimension measured benevolence through 8 items assessing kindness towards people with mental illness. The fourth dimension (7 items) measured pessimistic expectations that people with mental illness are unlikely to improve and that society treats them with no optimism. The last dimension (3 items) was used to assess stigmatization, with items that perceive mental illness shameful and should be hidden.

The responses were on a 3-point Likert scale: "Disagree, agree, and strongly agree." These were scored 0, 1, and 2, respectively. The scores of each dimension's items were summed-up, with a different maximum score for each dimension according to its total number of items. Therefore, for easy comparability among the different dimensions, each dimension's total score was converted into a standardized percent score, so that the maximum score for all dimensions is 100. Then, the five dimensions' scores were summed up with reverse scoring of the positive items/dimensions so that a higher score indicates a more negative attitude. The total score was also converted into a standardized percent score with a maximum of 100. For categorical graphical presentation, a total attitude score of 60% or higher was considered negative, while a lower score was considered positive.

4.5. Procedures

Tool validation was ensured through a process of translation-back-translation of its two scales, as recommended by *Sireci et al. (2006)*. In this procedure, the original English forms of the two scales were translated into the Arabic language by two bilingual experts, and these were back-translated into English by two other bilingual experts. This process was repeated until reaching two identical versions. The final Arabic version was then facing, and content validated by a group of experts in Community Health Nursing, Psychiatric Nursing, and Psychiatry Medicine. All recommended modifications were performed, and the tool was ready for pilot testing.

The reliability of the two scales was assessed by measuring their internal consistency. They demonstrated an excellent reliability level with Cronbach's Alpha coefficients 0.75 for the belief scale, and 0.71 for the attitude scale.

A pilot study was carried out on a sample of adolescent school children representing about 10% of the primary study sample. The purpose was to test the questionnaires' clarity and estimate the time needed to complete it. The pilot study's adolescents were included in the primary study sample since no modifications were made based on its results.

Fieldwork: Once official permissions were secured, the researchers started the sampling process. A list of all secondary schools in the study setting's rural and urban areas was obtained from the Secretary Department of the Ministry of Education in Beni-Suef. Then, a simple random sample of 10 urban schools and five rural schools was selected. The administration of the selected schools was contacted to get their approvals to carry out the study. This approval was done through the use of official channels.

The researchers then started to visit the selected schools, met with the school director to explain the study's aim and procedures, and asked for permission to collect data. Then, one classroom was randomly selected from each of the three secondary grades of the school. From each classroom, 10-20 adolescents were randomly selected. The research handed them the self-administered questionnaire and instructions on filling it during recess time not to interrupt the schoolwork. The researcher was present for any clarification, and the filled forms were collected and checked for completeness. The data collection process lasted for three months from the beginning of February 2019 to the end of May 2019.

Ethical considerations: After a full explanation of the study's aim and the data collection form, all selected adolescents were informed that participation in the study was voluntary and that they have the right to withdraw at any time without giving any reasons. The confidentiality was protected through anonymity by the allocation of a code number for each participant. The parents were also informed about the study through the school administration.

4.6. Data analysis

Data management and statistical analysis were done using the statistical package for social science (SPSS) 20. Descriptive statistics included frequencies and percentages for categorical data and means, standard deviations, and medians for scale data. Cronbach alpha coefficient was calculated to assess the reliability of the two scales. Quantitative continuous data were compared using the Mann-Whitney test, and qualitative categorical variables were compared using the chi-square test. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of beliefs and attitude scores, multiple linear regression analysis was used. Statistical significance was considered at p-value <0.05.

5. Results

The adolescents' median age in the urban and rural samples was 14.0 years, although the mean age was lower

in the former ($p<0.001$), as shown in Table 1. The rural sample had a lower representation of grade 2 is higher (47.8%), had more illiterate fathers (26.1%) and mothers (46.1%), and less employed mothers (15.6%). All these differences were statistically significant.

Table 2 demonstrates that significantly more adolescents from rural areas were aware of mental illness (66.1%) and had read about it (91.7%). Compared with those from urban areas, they depended significantly more on TV/radio (49.4%) and talking to others (45.0%), but less on newspapers and magazines (1.1%). Meanwhile, approximately half of the adolescents in both samples reported knowing a person on mental illness treatment (46.7% and 47.8% respectively). On the other hand, very few urban (5.3%) and rural (2.8%) adolescents were personally treated for mental illness.

As illustrated in table 3, the adolescents in urban and rural samples generally had low scores of adolescent stigma beliefs and negative attitudes towards mental illness. The adolescents in the urban sample had significantly higher scores of beliefs related to treatment ($p<0.001$) and cure ($p=0.02$), as well as total beliefs ($p=0.006$). As for the negative attitudes, they had significantly higher scores related to benevolence ($p=0.001$), stigmatization ($p<0.001$), and total negative attitude ($p=0.005$). Conversely, rural adolescents had significantly higher scores related to stereotyping ($p=0.01$).

Figure 1 demonstrates that higher percentages of the adolescents in the urban sample had a high stigma belief about mental illness (18.3%) and negative attitude (39.2%) compared to those in rural areas, 8.9%, and 29.4%, respectively.

Table 4 points to a moderate, statistically significant positive correlation ($r=0.500$) between adolescents' scores stigmatizing beliefs about mental illness and negative attitudes towards mentally ill patients. The table also shows a weak, statistically significant negative correlation between adolescent negative attitude score and mother education ($r=-0.109$).

The multivariate analysis (table 5) identified rural residence as an independent statistically significant negative predictor of adolescent's stigmatizing belief score, in addition to having read about mental illness. However, the model explains a small part of the variance in this score. None of the other adolescents' characteristics influenced their belief score. Meanwhile, adolescents' urban or rural residence had no independent effect on their attitude score.

Table 6 indicates that the stigmatizing belief score was the leading independent, statistically significant positive predictor of adolescents' negative attitude scores. Conversely, having a working mother and using TV as a source of mental illness information were independent, statistically significant negative predictors of this score. Also, the model explains 27% of the variance in this score.

Table (1): Socio-demographic characteristics of adolescents in rural and urban samples.

Sociodemographic characters	Urban (n=360)		Rural (n=180)		X ² test	p-value
	No.	%	No.	%		
Age						
12-	158	43.9	53	29.4		
14-	197	54.7	120	66.7		
16+	5	1.4	7	3.9		
Range	11.0-17.0		12.0-17.0			
Mean±SD	13.7±0.9		14.1±1.0		U=20.76*	<0.001
Median	14.0		14.0			
Grade						
1	124	34.4	33	18.3		
2	190	52.8	86	47.8	38.29	<0.001
3	46	12.8	61	33.9		
Father education						
None formal	29	8.1	47	26.1		
Basic	66	18.3	21	11.7		
Secondary	164	45.6	81	45.0	36.88	<0.001
University	101	28.1	31	17.2		
Father job						
Worker	92	25.6	52	28.9		
Employee	107	29.7	68	37.8	6.81	0.08
Trade	98	27.2	35	19.4		
Professional	63	17.5	25	13.9		
Mother education						
None formal	48	13.3	83	46.1		
Basic	66	18.3	13	7.2	79.39	<0.001
Secondary	165	45.8	70	38.9		
University	81	22.5	14	7.8		
Mother job						
Housewife	255	70.8	152	84.4		
Employed	105	29.2	28	15.6	11.98	0.001

(*) Mann-Whitney test

Table 2: Adolescent's experience with and awareness of mental illness among rural and urban samples.

Adolescent's experience with and awareness of the mental illness	Urban (n=360)		Rural (n=180)		X ² test	p-value
	No.	%	No.	%		
Awareness of mental illness	144	40.0	119	66.1	32.75	<0.001
Know the mental illness definition	118	32.8	58	32.2	0.02	0.90
Read about mental illness	291	80.8	165	91.7	10.72	0.001
Know a person on mental illness treatment	168	46.7	86	47.8	0.06	0.81
Personally, treated for mental illness	19	5.3	5	2.8	1.77	0.18
Sources of information: @						
TV/radio	123	34.2	89	49.4	11.75	0.001
Talking to others	125	34.7	81	45.0	5.37	0.02
Newspapers/magazines	19	5.3	2	1.1	5.57	0.02
Books	45	12.5	20	11.1	0.22	0.64
Internet	104	28.9	57	31.7	0.44	0.51

(@) Not mutually exclusive

Table 3: Scores of adolescent's stigma beliefs and negative attitudes towards mental illness among rural and urban samples.

Variables	Urban (n=360)		Rural (n=180)		Mann-Whitney Test	p-value
	Mean±SD	Median	Mean±SD	Median		
Adolescents stigma beliefs about mental illness						
Nature	28.7±14.6	30.00	27.7±13.0	25.00	0.53	0.47
Causes	35.5±16.3	33.30	37.0±14.7	38.90	1.18	0.28
Treatment	36.3±12.1	35.00	32.3±10.9	30.00	13.33	<0.001
Cure	26.0±20.4	25.00	22.2±20.3	25.00	5.73	0.02
Effect on family	22.9±19.2	21.40	19.2±14.5	21.40	2.30	0.13
Total	29.9±11.0	29.20	27.7±9.1	27.25	7.69	0.006
Adolescents negative attitudes						
Separatism	31.6±17.1	33.30	33.2±13.8	33.30	2.06	0.15
Stereotyping	40.3±26.8	50.00	45.8±23.6	50.00	6.42	0.01
Benevolence	50.0±15.0	50.00	45.6±14.7	43.80	10.41	0.001
Pessimistic expectations	31.3±17.0	28.60	29.4±15.7	28.60	1.47	0.23
Stigmatization	33.0±22.3	33.30	25.8±19.5	16.70	13.15	<0.001
Total	37.2±11.1	36.50	36.0±9.2	35.50	7.72	0.005

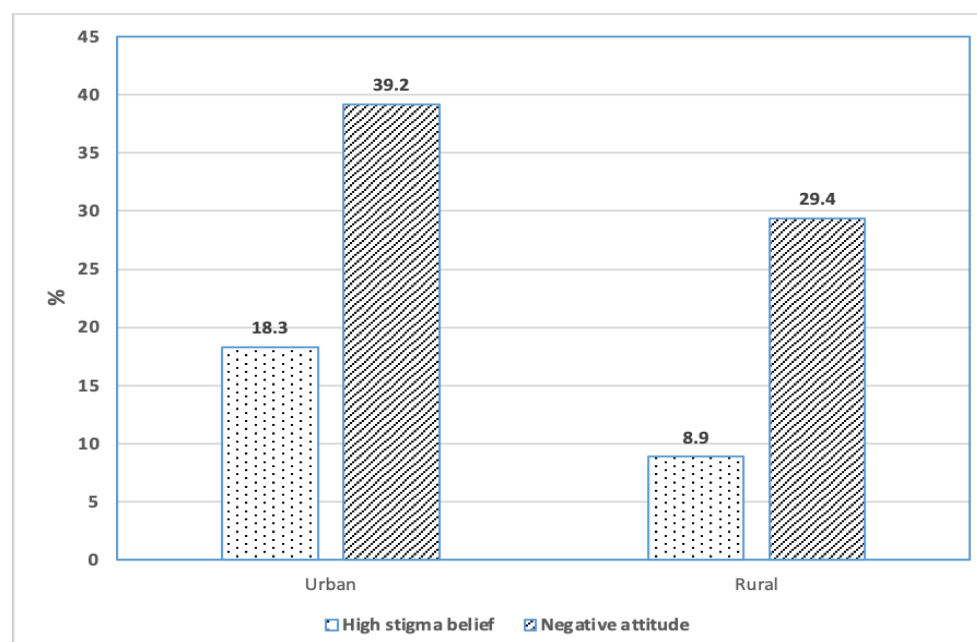
(*) Statistically significant at $p < 0.05$.**Figure (1): Comparison between total rural and urban male adolescents' beliefs and attitudes towards mental illness.**

Table 4: Correlation between adolescent's stigma belief and negative attitude scores and their characteristics.

Personal characteristics	Spearman's rank correlation coefficient	
	Stigma belief scores	Negative attitude scores
Negative attitude score	0.500**	
Age	-.045	.034
Grade	-.058	.011
Father education	-.009	-.057
Mother education	-.036	-.109*
No. of sources of information	-.038	-.037

(*) Statistically significant at $p < 0.05$ (**) Statistically significant at $p < 0.01$.**Table 5: Best fitting multiple linear regression model for the stigmatization belief score.**

Variables	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	34.45	1.59		21.648	<0.001	31.32	37.58
Rural residence	-1.83	0.95	-0.08	-1.918	0.056	-3.70	0.04
Read about mental illness	-3.40	1.24	-0.12	-2.747	0.006	-5.84	-0.97

 $r\text{-square}=0.02$ Model ANOVA: $F=6.48$, $p=0.002$

Variables entered and excluded: age, grade, parents' education, mother job, knowledge, reading, various sources of information, know a psychiatric patient, receive psychiatric treatment

Table 6: Best fitting multiple linear regression model for the negative attitude score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	25.69	1.66		15.448	<0.001	22.43	28.96
Working mother	-2.42	0.90	-0.10	-2.681	0.008	-4.19	-0.65
TV as a source of information	-1.53	0.80	-0.07	-1.927	0.055	-3.09	0.03
Stigma beliefs' score	0.51	0.04	0.50	13.564	<0.001	0.43	0.58

 $r\text{-square}=0.27$ Model ANOVA: $F=65.83$, $p < 0.001$ Statistically significant at $p < 0.05$

Variables entered and excluded: age, grade, parents' education, knowledge, reading, other sources of information, know a psychiatric patient, receive psychiatric treatment, residence

6. Discussion

Mental illness is a predominant issue in public health, contributing to substantial economic and emotional community burden. This study aimed to compare the beliefs and attitudes towards mental illness between rural and urban male adolescents in Beni-Suef Governorate.

According to the present study results, adolescents from rural areas had a higher awareness of the mental illness, and a great majority of them reported having read about it. Their primary sources of information were TV/radio and talking to others, while printed material was minimally used. This higher awareness might have influenced their attitudes and beliefs. The use of TV/radio as sources of information was identified as an independent negative predictor of the negative attitude score, reflecting a beneficial influence on mental health attitude. In congruence with this, studies in Japan Koike *et al.* (2016) and in Cambodia Alfredsson *et al.* (2017) showed the critical role of TV and public media in improving mental illness views. Meanwhile, and in agreement with the present study findings, Mohandass *et al.* (2019), in an Indian study, highlighted the deficient role of printed material in improving public knowledge and attitudes towards mental illness.

The current study revealed that adolescents from urban schools had significantly higher scores of stigmatizing beliefs related to treatment and cure of mental illness. This finding reflects their misconception regarding the nature and treatment of these illnesses. In agreement with this, Barke *et al.* (2011), in a study in Southern Ghana, found a higher level of negative stigma beliefs among the majority of urban residence participants. On the other hand, a study in Japan demonstrated that most participants believed that schizophrenia and depressive disorder were curable diseases (Kasahara-Kiritani *et al.*, 2019).

Concerning the negative attitudes towards mental illness, the present study findings indicated inclusive discrepancies between adolescents from urban and rural schools. Thus, urban schools' adolescents had higher scores related to the negative attitudes regarding benevolence and stigmatization. Conversely, adolescents from rural schools were having higher scores related to stereotyping. This finding might be attributed to the commonly used vocabulary related to mental illness, referring to these patients' madness in the rural community. However, the rural community tends to be more benevolent, given close societal relationships. In agreement with this, Lampropoulos *et al.* (2019), in a new study of the

relationship between stigma and social representations, revealed a close association between mental illness terminology and stigmatizing stereotypes, such as dangerousness and double personality in referring to schizophrenia.

The present study findings revealed that an essential proportion of adolescents in secondary schools have negative attitudes towards mental illness, and a relatively smaller percentage have related stigmatizing beliefs. Adolescents living in urban areas seem to have more negative attitudes and stigmatizing beliefs than their rural areas' counterparts. The findings are consistent with *Pang et al. (2017)*, whose study on Singaporean. The study demonstrated high levels of misconceptions about mental illness among adolescent students, and the authors recommended campaigns for stigma reduction in schools. Similar findings with high stigmatizing and negative attitudes were also reported by *Subramaniam et al. (2017)* in a multiethnic Singapore study.

In total, fewer adolescents from rural schools were having stigmatizing beliefs about mental illness, and the scores of their total beliefs were lower in comparison with their urban schools' colleagues. This independent effect of the type of residence (rural vs. urban) was confirmed in multivariate analysis, where the rural residence was identified as a significant independent negative predictor of the score of stigmatizing belief. This finding might be attributed to the more sympathizing and compassionate nature of the rural community. In congruence with *Olofsson et al. (2018)* study in rural Cambodia, highlighted the effects of the cultural, historical, and religious aspects in the community aspects on the attitudes and beliefs towards mental health and illness.

Additionally, the lower total score of stigmatizing beliefs towards mental illness among adolescents from rural schools might be due to more reading about mental illness as reported by them. This factor was also identified as a significant independent negative predictor of the score of stigmatizing belief. This finding is quite plausible since reading would certainly improve knowledge, consequently positively impacting attitudes and beliefs. In congruence with this, a study in China reported a significant positive correlation between mental illness knowledge and attitudes (*Chen et al., 2018*).

Although the bivariate analysis of the present study data demonstrated that more adolescents in the urban schools' sample were having total negative attitudes towards mental illness, and they had significantly higher total scores of negative attitude, the multivariate analysis could not identify the urban/rural residence as a factor having an independent influence on this score. However, the findings indicated that stigmatizing belief was the most influential on the negative attitude score. Moreover, a moderately significant positive correlation was revealed between the stigmatizing belief and negative attitude scores. A similar association between misconceptions and false beliefs on the one hand and negative attitudes towards mental illness, on the other hand, in a Lebanese study (*Abi Doumit et al., 2019*).

Other factors independently influencing the stigmatization negative attitude score identified in the current study were the use of TV as a source of information about mental illness and having a working mother. These two factors were negative predictors of the stigmatizing belief score and negative attitude, meaning their positive effect on adolescents' beliefs, as evident, by the national trends towards mental health promotion. In congruence with this, *Koike et al. (2016)* mentioned that the knowledge and beliefs related to mental illness among Japanese people have greatly improved in the two decades following the changes in mental illnesses' nomenclature for stigma reduction in the media.

As for mothers' working status, it could undoubtedly be attributed to the positive effect of employment on women's mental and mental states, which could be reflected in their children. The literature abounds with studies relating mother employment to their children' health and risk behaviors, and physical and psychological health, reflecting their beliefs and attitudes. Examples are the effects of maternal employment on child obesity *Galfo et al. (2016)*, physical activity *Khan et al. (2017)*, suicidal ideation *Kim et al. (2019)*, risky sexual practice *Yazdi-Feyzabadi et al. (2019)*, and emotional and behavioral difficulties *Naveed et al. (2020)*.

7. Conclusion

The adolescents from urban or rural areas in Beni-Suef Governorate differ in their beliefs and attitudes towards mental illness, with more stigmatization among urban settings. Media and mother employment seem to influence their attitudes and beliefs.

8. Recommendations

Manipulative a school-based educational intervention to improve adolescents' attitudes towards mental illness, with studies evaluating their effectiveness.

9. Limitations

The study results cannot be generalized to all Upper Egypt Governorates nor Lower Egypt ones due to variations in cultures. Moreover, the study was limited to boys because they might be more prone to stigmatization, as indicated by literature. However, a similar study on girls is highly recommended.

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