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The Obstacles of Rural Women Participation in Agricultural Development in Erbil Province of Iraq

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Authors' contributions

This work was carried out in collaboration between both authors. Author SHA designed the study, performed the statistical analysis, this work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The role of rural women's in agricultural activities is substantial in Iraq, especially in Erbil province. The aim of the study is to determine the problems of rural women faced during agricultural activities. This study is conducted in Erbil province which is located in the North of Iraq. The data is collected from 250 women from through face to face interviews. Results show that the obstacles of women's role in agricultural development are lack of literacy due to their poor academic background, increased work inside and outside of activities of rural women, family obstacles, whereby women always face disagreement with their family while attending to social and economic activities. Furthermore, the women also have obstacles in the agricultural development due to the gender discriminations as well as due to low attendance of women NGOs to track their problems.

Keywords: Obstacles; agricultural development; rural women; Erbil; Iraq.

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1. INTRODUCTION

Today's globalized community has preferred the agriculture as an engine for the overall growth and development of the world. It plays a crucial role to reduce the poverty level in the countries as it is regarded as the main occupation of the poor people [1]. Women make essential contributions to the agricultural and rural economies in all developing countries. Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes [2]. Many of these activities are not defined as "economically active employment" in national accounts but they are essential to the well-being of rural households, but the facts that nowadays people involve less in the agriculture sector rather commercial. People are attracting to the commercial business activities like banking, financing, cooperating , etc… as people see more profit and quality life in that sector rather than agricultural sector [3]. In many developing countries, rural women are regarded as the foundation for everyday family survival and agriculture. Though women play a major part in the agriculture, they are probably facing different problems which obstruct their empowerment [4]. The economic status of Northern Iraq has been primarily dominated by the agriculture sector. Despite the shift towards industrialization, this sector has been a mainstream source for rural economy contributing to the overall socio-economic status of the community [5]. Therefore, it is obvious that improvement in the agriculture sector is the fundamental activity needed to reduce poverty and improve quality of life especially in rural parts where a woman is central in agricultural activities. Iraq, being an agricultural based country, the role of women in the agricultural sector is same as in other parts of the rural community. The women are primarily involved in farming, maintaining of livestock, crop harvesting activities and other household works. Women have to work through the whole day to feed children [6]. Women in rural areas can contribute to both the agricultural and economic development in all developing countries. It is said that around 50% of rural women inhabitants have a considerable role in the economic and social development [7]. Additionally to develop sustainability, it is very important to pay attention to the condition of women beside men for the participation in various economic and social development activities. In spite of the huge efforts that rural women invest, their role is ignored in economic developmental activities. Thus, a certain group of rural women and young people are involved for the overall developmental of rural areas [8]. Agriculture has the potential to again be a dynamic contributor to the economy of the Kurdistan Region and to the economy of Iraq as a whole [9]. Extension, in general terms, is a function that can be applied to various areas of society. It operates in the industrial, health and education sectors, as well as agricultural and rural development. The term «Extension» is, therefore, applicable to various areas of development. If extension is assumed as an educational process with the aim of conveying useful information for rural producers and changing their insight, knowledge, attitude and skills in order to access a better life for their family and society [9]. Rural women participation is very significant for the sustainable development, and also they are considered as the center of the development process and help to improve the agricultural condition [10]. Rural women constitute 70% of agricultural workers, 80% of food producers and 60 to 90% of rural women process basic food stuff and are involved in the marketing activities [11]. Benson and Jafry [12] contend that the lack of information about the new and latest technological equipment are the hindrance for the agricultural development in the rural areas. Women should be encouraged and motivated [13]. From the viewpoint of macro-economic analysis, women participation is equally important in creating income, production, and entrepreneurship, science and technology development. The involvement of the rural women in the agriculture not only contributes to the progress of macro-environment factors but also gives respect, status, social position as well as it evolves the feeling of dependability from the social viewpoint [1]. Effective results from any activity is only gained by the involvement of both genders and capitalizing on their expertise, knowledge and personal management. Men and women work together in a society and are affected by the job conditions that are provided to them [14].

2. MATERIALS AND METHODS

2.1 Research Methodology

The researcher has maintained the confidentiality of the information gained from the participants by following the principles of ethics like objectivity, honesty, openness, integrity along with respect for the intellectual property [15]. Therefore, respondents are assured the privacy of their answers, views and opinions and won't be disclosed without their permissions.

2.2 Research Survey Method and Data Collecting

The study was conducted in northern region of Iraq during 2016. Sampling was performed selection 25 identified towns / villages in the local government area. In the second stage, ten registered female farmers from each of the selected villages were randomly chosen and interviewed for the purpose of this study. Thus, a total of 250 women were selected for this study. The selected women participated in providing answers to the 21 questions forming the survey questionnaire. Topics included obstacles of rural women participation in agricultural development and factors that impact agricultural extension training programs targeting women farmers. The location of Erbil provinces between latitudes 35° 30´ and 37° 15 N, and longitudes 43° 22´ and 45°05´ E [16].

2.3 Data Analysis Methods

Data analysis statistics were performed using the Statistical Product and Service Solutions (SPSS) software, an IBM product acquired by IBM in 2009 [17]. Descriptive statistics included percentages and frequency distribution tables and were used to analyze data on selected personal and socio-economic characteristics of the women, their access to economic resources, technical and professional skill information (extension services). Further, a (m × n) contingency table with Chi-square was used to test whether a statistically significant relationship exists between some categorical variables and rural women's participation.

3. RESULTS AND DISCUSSION

The interpretation of results and analysis aligns with the general objectives of the study, which was to determine the obstacles of rural women participation in agricultural development in Erbil province.

3.1 Socio-Demographic Characteristics or Respondents

Demographic characteristics of participants have important value attributes to any society as they reflect their behavior in decision making and its probable expected responses too many stimuli exposed to them. The general characteristics of respondents examined in this study were: marital status, educational levels, and the age of the respondents. There is a tendency that productivity will continue to fall owing to their declining strength. In Table 1, results show that the age of respondents was categorized into four groups, the first group was 17.27%, second 27.31%, third 32.53% and the forth group was 22.89% and it was found that the majority of participants in the survey were young age. Many studies show that older women are more involved in the institutions' activity and agriculture production. In general, the household size should measure the number of working member's participation in agricultural production; this probably means that, younger members of the households are not participating actively in agricultural production [18,19,20]. This finding is in agreement with the report [21] which indicated the age characteristics of the household head as a positively contributing variable if he/she is in middle age category because he/she could actively engage in agricultural activities; and with the report by [22] which indicated an individual may lose ability and energy to get involved in agricultural activity of yield increasing practices as he/she gets older.

Table 1 also shows that 92.77% of women are married, a fact that reduces the time and opportunity of women to participate effectively since women are responsible for child care and household activities. This can be time-consuming depending on the type of task, size and structure of the household. According to [20], the primary reason for women's inability to expand their work to market is their extensive involvement in family care and household activities.

Table 1 shows that 59.84% of the respondents are uneducated. Education status plays an important role in the acquisition of skills and technology transfer. Respondents reported different levels of educational attainment. While 30.92% of the women who participated completed elementary school, only a minority of

0.44% of the respondents have university diploma. The minority of the respondents had professional (BSc) educational achievements in agriculture. This low level of education, no doubt, affects the level of adoption of technology and skills. According to [19], the higher levels of education have the potential to improve some of the deficiencies that act as barriers towards communication in the field of agriculture.

Since in the study area illiteracy rate was very high, that is 59.84% of respondents, this finding is in agreement with argument of [23] that stated educational status of a household head positively affects the knowledge, attitude and practices towards accessing modern agricultural extension service and better agricultural production technology. Thus, it is concluded that high illiteracy rate could be one of the limiting factors for women's access to agricultural extension service for all women's farmers in general and for female farmers in particular in Erbil province.

3.2 The Obstacles of Rural Women Participation in Agricultural Development

Rural women work hard for long hours, usually for a small reward, often neglected by extension services. As women have been playing an important role in the agricultural sector, they are considered as the backbone for rural and national economic development. Women make up 43% of worlds' total agricultural labor that increases up to 70% in some nations [2].

3.2.1 Individual obstacles

Several lead to the main difficulties that cause the women farmers not to engage with activities and training on agricultural extensions including the lack of education, their chores at home looking after family members especially in cooking and cleaning, outside of the home low accessibility of rural women to various resources, including participation in the extension programs. The aforementioned obstacles have hindered the role of women in the agricultural development [24]. Table 2 shows individual obstacles for women farmers and the main difficulties that cause the women farmers not to engage with activities and training on agricultural extension. Furthermore, the results indicate that the participation of rural women in the extension programs decreases with the increasing education in contrast to the findings from [24, 25]. They reported that the level of education and experience in the cultivation influence the participation of rural women in the extension programs [26].

Other results show that 71% of the respondents face literacy obstacles due to their poor academic background, 23% of the respondents mentioned the lack of self-confidence, only 7% of the respondents believe that the inferiority feeling and resignation is an obstacle, and 95% of the respondents claimed that their obstacles lie in the increased work inside and outside of activity of rural women. Since rural women take different responsibilities and roles, such as producers of crops, ranching and keeping poultry, children's education, housekeeping, supervising family economy and managing it, and so, would not be effective in developing rural societies. So, the importance of education is very critical for rural women especially extensional education.

Furthermore, Table 2 shows that 56%, 46% and 94% of the respondents consider low information, applied scientific knowledge and handicrafts and ranching, respectively. Illiteracy is beyond many of the problems, leading to decrease in self-confidence, feelings of inferiority and resignation. In addition, seasonal migration activities affect both men and women in rural areas (for example, nursery, home, business, agriculture, handicrafts, and animal) wealth and low information and knowledge and the application of knowledge scientifically [1].

Rural women have the potential to work for increasing food production, but, to meet the future demands, it won't be sufficient. To ensure the best living conditions in vulnerable communities, special measures should be taken to fight malnutrition in the region. In most UN reports, women have been considered as the largest deprived group of the human societies. While at the global level, about two third of all affairs are done by women, however, they form 50% of the workforce in agriculture and they produce half of the foods all over the world. So, educating women is important, as concluded by [27].

Table 3 gives the result of Chi Square tests [x^2] between agriculture extension training and individual obstacles that would show the relation between non-participation of the women farmers in the extension training and handicrafts and ranching. Results show that only one variable is statistically valid namely, whereby women farmers work manually in all activities such as handicrafts and ranching as field preparation and planting weeding. All other individual obstacles

showed no statistical significant relationship between the lack of participation of rural women in activities and training courses for agricultural extension and other individual obstacles.

Table 1. Sociodemographic characteristics of respondents in Erbil Province

Sociodemographic characteristics of respondents		Frequency	Percentage (%)
Age of rural women farmers	18-25	43	17.27
	25-35	68	27.31
	36-45	81	32.53
	46-60	57	22.89
The marital status of women farmers	Married	231	92.77
	Single	6	2.41
	Widow	12	4.82
The educational levels of rural women farmers	Illiterate	149	59.84
	Primary	77	30.92
	Secondary	14	5.62
	High school	8	3.21
	Bachelor	1	0.40

Table 2. The individual obstacles of rural women participation in agricultural development

Individual obstacles	Never (%)	Sometime (%)	Always (%)	Mean (*)	Std. deviation
Literacy	6.00	71.0	23.0	1.17	0.51
Lack of self-confidence	77.0	23.0	0.00	0.23	0.42
Inferiority feeling and resignation	93.0	7.00	0.00	0.07	0.25
Increased work inside and outside	0.00	5.00	95.0	1.95	0.22
Home affairs	0.00	8.00	92.0	1.92	0.27
Handicrafts and ranching	0.00	6.00	94.0	1.94	0.25
Low information	4.00	56.0	4.00	1.36	0.56
Their applied scientific knowledge	4.00	46.0	49.0	1.17	0.51

**The Mean of Never = 0; Sometimes = 1; Always = 2*

Table 3. Factors affecting the rural women's participation in agriculture extension training with individual obstacles

Individual obstacles		Agriculture extension training			x^2 test (P-value)
		Sometimes (%)	Never (%)	Total (%)	
Literacy	Always	67.2	32.8	100.0	0.328 (0.849)
	Sometimes	64.2	35.8	100.0	
	Never	60.0	40	100.0	
Lack of self-confidence	Sometimes	58.6	41.4	100.0	1.206 (0.277)
	Never	66.5	33.5	100.0	
Inferiority feeling and resignation	Sometimes	64.7	35.3	100.0	0.000
	Never	64.7	35.3	100.0	(1.00)
Increased work inside and outside	Always	64.4	35.6	100.0	0.125 (0.488)
	Sometimes	69.2	30.8	100.0	
Home affairs	Always	65.1	34.9	100.0	0.207 (0.409)
	Sometimes	60.0	40.0	100.0	
Handicrafts and ranching	Always	66.5	33.5	100.0	5.519 *
	Sometimes	37.5	62.5	100.0	(0.021)
Low information	Always	63.6	36.4	100.0	0.075 (0.788)
	Sometimes	65.3	34.7	100.0	
Their applied scientific knowledge	Always	65.0	35.0	100.0	1.886 (0.389)
	Sometimes	66.1	33.9	100.0	

**Statically important at 5% level, * If P-Value ≤ 0.05 statistically significant, * If P-Value > 0.05 not statistically significant*

Women's daily workloads do not usually allow them to be absent from home for residential training; even attending short courses may cause insuperable problems in arranging substitute care for children or the home. And second, even where attendance of women is quite high as a proportion of the total, women are given instruction mainly in home economics and craft subjects, not technical agriculture [28]. Networks operating in rural areas especially rural women's organizations are involved in the conception of development programs, these organizations must be aware of the local reality [29].

Gender, cultural norms and security issues make it more difficult for women than for men in accessing public services, social protection, employment, and markets [30]. The problems of rural women can be divided into four main categories that are economic, social, family and individual [31]. These problems are interconnected and they are closely linked to environmental, social and political changes. The level of education and experience in the cultivation influences the participation of rural women in the extension programs. As a result, female individuals may not be able to attend meetings and training opportunities program benefit or extension of a relationship because they simply do not have time, Although the proportion of time available between the various regions varies, as well as across different types of households, it is estimated the most of women work for about 16 hours a day [32].

3.2.2 Family obstacles

Results in Table 4 show that 88% of the respondents believe that disagreement of their family while attending at the social and economic activity is a family obstacle. Such a result leads to the fact that women farmers do not engage with activities and training on agricultural extensions due to the gender discriminations (86%). The survey results showed that 93% of the respondents did not consider negative attitude about the women's abilities as an obstacle against their participation. Further, 81% of the respondents revealed that they have faced obstacles in agricultural development because of the economic poverty of the family. Those factors come similar to the conclusion of researchers from family biases and husband and father's disagreement with women's attendance at social and economic activities due to various cultural reasons and also the lack of knowledge about how to behave with girls and women [33].

Due to their involvement in household activities and child-rearing women are only able to participate in self-employment opportunities rather than high paying employment programs. The extension program should be introduced to meet the demands and interest of many family members.

Table 5 shows Chi Square [x^2] test between agriculture extension training with family obstacles. Results show that only one variable was statistically significant. That is, there is a strong correlation between the lack of participation of rural women in agricultural extension training and the negative attitude about the woman abilities. The participation of men and women members in extension training organizations are conditioned by economic, social and cultural factors, several authors have analyzed the factors affecting women's participation in producer organizations and identified major barriers for women's participation. These include: socio-cultural norms and gender perceptions; women's double burden and triple roles; women's status, age and previous membership in an organization; access to assets and resources; organizations' rules of entry; legal and policy environment; women's preferences and motivations; and women's education, training and access to information [34,35,36].

Table 4. The Family obstacles of rural women participation in agricultural development

Family obstacles	Never %	Sometime %	Always %	Mean (*)	Std. deviation
Disagree family attendance	0.0	12.0	88.0	1.88	0.32
Gender discriminations	2.0	12.0	86.0	1.84	0.42
Economic poverty of family	16.0	81.0	2.0	0.86	0.41
Lack of knowledge, behave them	16.0	84.0	0.0	0.84	0.37
Negative attitude about their abilities	93.0	7.0	0.0	0.07	0.26

**The Mean of Never = 0; Sometimes = 1; Always = 2*

Table 5. Factors affecting the rural women's participation in agriculture extension training with family obstacles

Family obstacles		Agriculture extension training			x^2 test (P-value)
		Sometimes (%)	Never (%)	Total (%)	
Disagree family attendance	Never	45.5	54.5	100.0	2.403 (0.148)
	Always	66.4	33.6	100.0	
	Sometimes	51.7	48.3	100.0	
Lack of knowledge, behave them	Sometimes	65.6	34.4	100.0	0.453 (0.308)
	Never	60.0	40.0	100.0	
Negative attitude about their abilities	Sometimes	83.3	16.7	100.0	2.961***** (0.057)
	Never	63.2	36.8	100.0	
Gender discrimination	Always	65.0	35.0	100.0	0.079 (0.961)
	Sometimes	62.9	37.1	100.0	
Economic poverty	Sometimes	65.9	34.1	100.0	3.666 (0.160)
	Never	58.5	41.5	100.0	

**Statically important at 5% level*
** If P-value ≤ 0.05 statistically significant*
** If P-value > 0.05 not statistically significant*

The policies for rural agriculture development should be tested and reassessed when necessary to ensure effective social learning by rural women. The women who possess expertise should be dealt with as important part of the development process; this finding is in line with the findings from [24]. The rural women had the least participation in the items; attending the training courses, reading the extension brochures and interaction with the male extension workers. However, as noted earlier, various family members and the community surrounding them have their own needs that must be taken into account in the guidance programs to diminish the obstacles. The reason may be that in some cases, the lack of knowledge regarding how to behave with women and girls, resulted into obstacles in agricultural development. Women organizations and other farmers having concepts for developmental programs should be provided with financial and political support for implementing their ideas and introducing income generating activities in rural areas. Researchers have noted the less availability of time and cultural norms, male dominance, etc… These constraints are faced by women farmers [37,38]. It is essential to understand the roles of men and women in the production practice, their information desires, the nature of the special constraints faced by females, and the implications of these constraints for extension [39]. The findings of this study conclude that the participation of rural women in Erbil province in the extension programs are lower than average. But training needs to be complemented by other strategies to bring about change in institutional behaviors. Critical adjustments may be introduced which can increase women's access to and the relevance of extension significantly. The aforementioned is possible even where most field agents are males and the low accessibility of rural women to various resources, including participation in the extension programs due to social and family obstacles, has hindered the role of women in the agricultural development [12].

3.2.3 Social obstacles

Results in Table 6 show that 85% of participants claim that bad habits and traditions may be the reason for the lack of effective participation of rural women. 88% of the respondents thought the patriarchy or disagreement, 82% of the respondents believe the low presence of women is the cause, and 85% claim Other results show that more obstacles face rural women including bad customs and traditions, factors of production, having far access to extension services, the extent of rural low wages compared with men labor, low attendance of women's organizations, lack of community follow up on their cases and problems, and low enrollment of women in rural areas management [39]. Gender differences become clearer when looking at women's workloads. It is estimated that women provide 85-90% of the time spent on household food processing and preparation across a wide range of countries [40].

Table 6. The social obstacles of rural women participation in agricultural development

Social obstacles	Never (%)	Sometime (%)	Always (%)	Mean (*)	Std. deviation
Patriarchy and disagreeing	0.0	12.0	88.0	1.88	0.33
Low extent of rural women's	0.0	13.0	87.0	1.87	0.34
Being far of accessibility	0.0	14.0	86.0	1.86	0.35
Bad customs and traditions	0.0	15.0	85.0	1.85	0.36
Low attendance of women	0.0	18.0	82.0	1.82	0.39
Limited number of females	21.0	76.0	3.00	0.82	0.46
Problems of access	33.0	66.0	1.0	0.67	0.45
Low women's access	90.0	10.0	0.0	0.10	0.29

**The Mean of Never = 0; Sometimes = 1; Always = 2*

Table 6 indicates that the respondents always faced obstacles because of the low attendance of women NGOs to track their problems and issues (82%). Rural women, as the half of human population in rural areas, play a significant role in social and cultural realms along with economic roles in rural areas Women usually are not able to actively participate in programs of economic possibilities. Though norms may differ slightly from different culture and time, women are mostly involved in household activities such as rearing of livestock and child-rearing. This work is unpaid and acts as a burden to expand them to participate in economic opportunities, which would result in low income [41].

Accordingly, it is important to pay attention to how one may increase women participation and involvement in a development process, especially because of past research efforts, so often ignored, or misrepresented them. Most of the women are illiterate or less educated and often unable to attend or continue formal training courses, social or economic services. Under such conditions, rural women remain passive with less chance to develop their own abilities [40]. As a result, this situation has caused the women to be the most vulnerable group in rural development programs.

As shown in Table 7, which depicts a Chi Square testing t the relationship between agriculture extension training and social obstacles. This part of the study was intended to identify the factors that hinder women attendance and participation in training programs. Results show only one

Table 7. Factors affecting the rural women's participation in agriculture extension training with social obstacles

Social obstacles		Agriculture extension training			x^2 test (P-value)
		Sometimes (%)	Never (%)	Total (%)	
Bad customs and traditions	Always	64.2	35.8	100.0	0.161 (0.852)
	Sometimes	67.6	32.4	100.0	
Patriarchy and disagreeing	Always	66.7	33.3	100.0	3.207* (0.058)
	Sometimes	50.0	50.0	100.0	
Low women's access	Sometimes	79.2	20.8	100.0	2.444 (0.087)
	Never	63.1	36.9	100.0	
The difficulty of access to agricultural extension services.	Always	68.7	31.3	100.0	10.836* (0.02)
	Sometimes	40.0	60.0	100.0	
Limited number females	Sometimes	62.2	37.8	100.0	2.348 (0.146)
	Never	73.6	26.4	100.0	
Problem so f access	Sometimes	64.5	35.5	100.0	0.09 (1.000)
	Never	65.1	34.9	100.0	
Low extent of rural women's	Always	63.4	36.6	100.0	1.084 (0.334)
	Sometimes	72.7	27.3	100.0	
Low attendance of women	Always	67.0	33.0	100.0	2.625 (0.125)

**Statically important at 5% level*

** If P-Value ≤ 0.05 statistically significant*

** If P-Value > 0.05 not statistically significant*

statistically significant relationship between agriculture extension training and the difficulty of access to agricultural extension services [Chi Square [x^2] test R =10.836, with P-value = 0.02 less than the standard error of 5%). That is, most women farmers' lack of participation in agricultural extension training is because of the difficulty of access to agricultural extension services. This major social constraint faced by rural women is reported by other researchers [41].

Married women's movement may be restricted in certain circumstances and when asked about the causes of labor constraints, cited the time they spent looking after their families, working in their husbands' gardens and producing food for their households as reasons for their inability to expand production in the market [41]. When discussing gender issues, literature and actors in the development tend to distinguish the concept of men and women as two separate categories, but none of the two is a homogeneous group, can be found on the homogeneity across the levels of the economic situation or social status, ethnicity, age, origin or religion, and so on [19,42]. Recent studies have suggested that rural women faced a full range of obstacles and hinder their participation further. These obstacles can be summarized as cultural obstacles even in the customs and traditions and religious practices. In some communities, women are prohibited from speaking directly with men outside the family [43].

4. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, women farmers in the study area are faced with many barriers in their quest for effective participation in agricultural production. Some of the barriers observed and which inhibit participation of women farmers in agricultural production generally are: the difficulty of access to agricultural extension services and access to extension staff, inadequate training and low standard of education, manual work in all activities such as handicrafts and negative attitude about the women abilities. The aforementioned barriers are important to be addressed by the federal, state and local governments so as to facilitate effective women's participation in agricultural production activities. This will boost their output and ensure greater food security in the study area and the nation. The findings also revealed that the socio-economic characteristics of the women farmers have a positive relationship with their effective participation in agricultural production. Based on the findings of this study, the following recommendations are made:

1. The extension agency should encourage the formation and membership of social cooperatives.
2. Women's access to information resources and educational references must be facilitated.
3. The government has to support and perform basic education programs (literacy, religious, cultural and economical-social education).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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