Unveiling parenting in Yemen : a study on maternal parenting practices in slums in Yemen

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Partner Conflict as a Mediator Between Parental Education and Maternal Sensitivity in Yemeni Slums

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Abstract

This study examined the unique effects of parental education and intelligence on maternal sensitivity and the mediating role of partner conflict in this association in 62 Yemeni families living in slum areas. Children's age ranged between 2-6 years old. Mother-child interactions were videotaped in a naturalistic situation using the Ainsworth sensitivity scale, where maternal sensitivity in these interactions was coded. Mothers were also interviewed about their partner conflict experiences and were asked to complete Raven's Progressive Matrices intelligence test. Results revealed that parental education rather than maternal intelligence predicted mothers' level of sensitivity. Findings also indicated a mediational role of partner conflict in the association between parental education and maternal sensitivity. Mothers with lower levels of education experienced more partner conflict and in turn were less sensitive to their children. Based on these findings, future intervention programs should be designed to target improving level of education for parents and investigate if this indeed leads to less partner conflict and increased sensitivity.

Keywords: Maternal sensitivity, maternal education, maternal intelligence, partner conflict, slums, Yemen, observation

Introduction

Raising children is a challenging task that parents around the world experience. This task becomes even more challenging for those who experience low socioeconomic circumstances. Up until now research on parenting has been conducted mainly in samples from middle-income European or American families (Deater-Deckard, Dodge, & Bates, 1996; McLoyd, 2000). However, little is known about parenting, and about parental sensitivity and its correlates in particular, in non-Western cultures. In developed Western countries, lower levels of parental education and intelligence are associated with less sensitive parent-child interactions (Tamis-LeMonda et al. 2004; Diehl, 1997; Menaghan & Parcel, 1991; Bacharach & Baumeister, 1998). However, education and intelligence are closely intertwined in these countries as a result of widespread accessibility of education, and therefore unique effects of each of these variables cannot be disentangled.

In less developed countries where education is not accessible to all as a source for developing intellectual skills, not all intelligent people get the opportunity to be educated. This is certainly the case in the country of Yemen, which is one of the poorest countries in the world (Focus Economics, 2018). In a context like Yemen, it is possible to scientifically test the unique effects of education and intelligence on parental sensitivity. In addition, a mechanism that has been found to underlie the relation between education/ intelligence and sensitive parenting in Western countries is parental conflict (Belsky, 1984; Conger et al., 1990; Levendosky & Graham-Bermann, 2000, 2001). The aim of this study is to test parental education and intelligence as potential unique predictors of parental sensitivity in mothers in slum areas in Yemen, and to test partner conflict as a potential mechanism within this relation.

Maternal Sensitivity

There is strong empirical evidence that parental sensitivity is related to child development (Mesman et al., 2012). Sensitivity, according to Mary Ainsworth's definition, is the ability of a parent to be aware of her child's signals, interpret those signals, and respond to those signals promptly and appropriately (Ainsworth, Bell & Stayton, 1974). Children who experience sensitive and responsive care tend to develop secure attachments whereas children who experience insensitive and unresponsive care are at risk of developing insecure attachments (Ainsworth et al., 1978; Bakermans-Kranen

burg,\Van IJzendoorn & Juffer, 2003). Early attachment is found to be associated with children's social competence with peers (Groh, Fearon, Bakermans-Kranenburg, Van IJzendoorn, Steele, & Roisman, 2014). In comparison to their insecurely attached age-mates, children with secure attachment together with ongoing sensitive care have been found to perform best in terms of expressive and receptive language, cooperativeness, school readiness, and behavior problems (Belsky, & Fearon, 2002). Similarly Mills-Koonce et al. (2007) emphasize that parental sensitivity, which predicts early parent-child secure attachment, leads to child developmental advantages. Because maternal sensitivity is a key variable in the positive development of children, examining its predictors is crucial to determining families at risk for less sensitive parenting patterns and thus less optimal child development.

Predictors of Sensitivity

There are many factors that have been studied as predictors of maternal sensitivity (Shin, Park & Kim, 2006). Maternal demographic characteristics like socioeconomic status (SES) and maternal intelligence are some of the most studied factors in relation to sensitivity (Conger, Conger, & Martin, 2010). SES covers three indicators: income, education and occupational status (Bradley & Corwyn, 2002, Ensminger & Fothergill, 2003; Conger et al.2010; Bangdiwala et al., 2004; Krieger, Williams, & Moss, 1997; White, 1982). Education is considered the strongest indicator of SES because it partially influences the other components of SES, namely occupation and income (Krieger et al., 1997). Education refers to the process of the attainment of knowledge, skills and values which in the formal education systems of schools and other educational institutions take the form of some qualification of children and adults (Biesta, 2009). Previous studies on parent-child interaction have shown that parental education is related to parenting quality. Tamis-LeMonda et al. (2004) found that mothers' educational acquisition is associated with sensitive parenting of young children. Mothers with more years of education were more sensitive and less intrusive toward their children (Tamis-LeMonda et al. 2004), showed more positive responses to infant behavior and distress (Diehl, 1997), and had a less controlling style in parent-child interaction (Ispa et al. 2004). There is also evidenceof intelligence being related to the quality of parental care. Parents with higher intelligence showed higher quality care of their children and provided better and more stimulating home environments for their children (Bacharach

& Baumeister, 1998; Baharu din & Luster, 1998; Menaghan & Parcel, 1991; Yeates, MacPhee, Campbell & Ramey, 1983).

However, within Western countries, intelligence is a strong proxy for education (and vice versa), with correlations as high as .78 (Rindermann, 2008) and .81 (Deary, Strand, Smith, & Fernandes, 2007). It could be argued that the relation between education and intelligence in Western countries is reciprocal: education increases intelligence and intelligent people can reach a higher education level (Rindermann, 2008). Given the strong intertwining of these two constructs, testing both as independent predictors of parenting is generally difficult in Western samples (Hadd, & Rodgers, 2017). However, in developing countries, we expect education and intelligence not to be as strongly related. For example, in the Yemeni context, even though education is compulsory, in reality it is only provided to those who have access to it through their social, economic and family educational background. In that setting, low educated people in Yemen can be people with all levels of intelligence. Within that setting, not all low-educated but intelligent people can reach the educational level for which they have the potential (World Bank Group, 2002). Based on that, the Yemeni context provides us with the scientific advantage to be able to study the unique effects of parental education and intelligence on parental sensitivity and the mechanisms behind those effects.

The Role of Partner Conflict

So far we know that there are links between parental education, parental intelligence and parental sensitivity but mechanisms behind them are largely unknown. Partner conflict is suggested to be one of the potential mechanisms. Previous research shows that lower levels of education and/or intelligence are associated with more partner conflict. Educational attainment was found to be associated with less marital stability (Heaton, 2002; Martin, 2006; Orbuch, Veroff, Hassan, & Horrocks, 2002), including a higher risk for physical and/or sexual intimate partner violence (Bangdiwala et al., 2004; El-Bassel, 2013; Jeyaseelan et al., 2004). An explanation of the negative association between education and partner con flict could be that education enables women to protect themselves from intimidation and physical violence (Jeyaseelan, et al., 2004) and have greater decision-making power (Cleland & Van Ginneken, 1988). Research also shows that low intelligence may be related to general aggression between partners (Vitacco, Neumann, & Wodushek, 2008) and to poor communication skills that are as

sociated with intimate partner conflicts (Walling, Meehan, Marshall, Holtzworth, Munroe & Taft, 2012).

Further, several studies have detected a robust association between partner conflict and maternal sensitivity which shows evidence that mothers with a history of partner conflict show lower levels of sensitivity towards their children. For instance, several studies showed that mothers who experience low levels of marital support are likely to provide less supportive environments for their children (Belsky, 1984; Conger et al., 1990), and that women with intimate partner conflict histories show lower levels of parenting warmth (Levendosky & Graham-Bermann, 2000, 2001).

Based on the associations found in previous research, partner conflict could play a mediating role in the relation between parental education/parental intelligence and parental sensitivity. In other words, educated/intelligent mothers may experience less partner conflict, which in turn will enable them to show more sensitivity to their children than mothers who are less educated/intelligent.

Mechanisms in the Yemeni Context

Yemen, being one of the poorest countries in the Arab region (United Nations Development Programme, 2010), provides a suitable context to test the hypothesized association between parental education or intelligence and parental sensitivity.Education in Yemen is still a big challenge particularly for women. Although Yemen's government provides for compulsory and free education for children who are between six and fifteen years old, compulsory attendance is not enforced and not everyone has access to education. On the top of the list of people who have limited access to education are Yemeni girls and women (United Nations Girls' Education Initiative, 2013). The country ranked 168 out of 188 countries and territories in the 2016 Human Development Report and 159 out of 159 countries in the gender inequality index (United Nations Development Programme, 2016). In comparison to 33.2 % of their male counterparts who reached at least secondary level of education (which is low in itself), only 15.6 % of Yemeni adult women have reached this level (United Nations Development Programme, 2016). Illiteracy in women is still a major problem in Yemen affecting more than 75% of women living in rural areas, and more than 40% of women living in urban areas (United Nations International Children's Emergency Fund, 2012).

Limited opportunities for women to pursue their education either at the prmary

level or even for higher education are the result of many factors. A major factor is the high cost of schooling which has prevented poor parents from making sure that their children in general, and girls in particular, are educated (United Nations International Children's Emergency Fund, 2012). Another factor is the high number of children per family. For decades, Yemeni women were the most fertile in the world, having an average of more than seven children. It is only since 2005 that this number dropped, to 4.7 in 2010 (Fanack, 2016) and to 4 in 2016 (World Data Atlas, 2016), still much higher than in the Western world. The high cost of raising a large number of children drives families in a poor country like Yemen to put their children into the labor market or household work rather than sending them to schools. This is particularly the case for girls, as nearly half of primary school-aged girls do not go to school (United Nations International Children's Emergency Fund, 2012). In large families, girls are needed at home to help around in the household work or in rearing younger children. A third factor preventing girls from being educated is child marriage. Yemen is one of the few countries in the Middle East region without a legal minimum age of marriage (United Nations International Children's Emergency Fund, 2017), and 50% of the girls in Yemen are married off before the age of 18 years, a figure that has risen to 65% as a result of the current conflict in Yemen (Office of the High Commissioner for Human Rights, 2017).

Marital relationships in Yemen are a typical illustration of women's subordinate position (Lackner, 1995). Yemeni women are obliged to obey their husbands by Divine law (Gautier, 2005), live in the matrimonial home, and do the housework (Lackner, 1995). This typically lays the ground for many conflicts including the abuse of women by their male partners and/or family members (Anwar, 2015). The most updated data on domestic violence in Yemen shows that marginalized, low-income and rural women arethe most vulnerable for partner conflict (Women National Committee, 2010). However, gaining a clearer insight of partner conflict in Arabic countries is hindered by traditions where in times of marital conflicts, most Arab families, including Yemeni families, do not go to a stranger; e.g., psychologist, to solve their problems (Baker, 2003). Instead, they rely heavily on the support of the extended families to help them solve those conflicts (Baker, 2003).

The Current Study

The current study tested the following hypotheses in families who live in slum

areas in Taiz, Yemen: 1) education and intelligence each have a unique effect on pa rental sensitivity 2) partner conflict mediates the associations between education/intelligence and sensitivity. Specifically, we expected mothers who had higher education/ intelligence to experience less partner conflict than mothers who have lower education. In turn, we expected the mothers who had less partner conflict to show more sensitivity to their children.

Method

Participants

The sample for this study consisted of 62 low-income mothers and their 2-6-year-old children. The majority of these families (71%) lived in an urban slum and 29% lived in a rural slum area in Taiz governorate, in the southwest of the Republic of Yemen. Mothers were included in the study if they were living in the selected urban or rural slum areas located in Taiz governorate, had at least one child between 2-6 years ofage of which they were the biological mother, had been living in the same area for at least 6 months, and were Muslim families. Mothers or children with significant physical and/or mental health problems were excluded. Families were recruited through a non-governmental organization (NGO) that also collected the data. The head of the NGO, along with her assistant and three community facilitators, women from the local community who played the role of a catalyst between the NGO staff and the mothers to be recruited, visited families to brief them on the project and to ask their permission to participate in the research. Families who had agreed to participate were then visited again for data collection

General descriptives about the sample are presented in Table 1. Maternal mean age was difficult to obtain as most of the mothers did not know their age. Out of 62 mothers, only 3 knew their birth month and year. All other mothers said they did not know in which month or year they were born or provided unsure or unreliable answers, such as "maybe 30 or 40" or "11 years". Parental education varied between mothers who had no education at all (53% illiterate), to 5% mothers who had a college degree. Most of the mothers in the sample were married (89%), 5% were divorced, and 7% were widows. Mothers did know their children's age; their mean age was 38.69 months (*SD* = 10.09). Fifty-two percent of the participating children were girls. The number of siblings in the families varied from the target child to be the only child per family (16%), children with

one sibling (21%), children with two siblings (21%), children with three siblings (16%), to children with four or more siblings (26% up to 10 siblings), to children who had 5 or more siblings (18%). None of the mothers had a job. Out of the 55 two-parent families, 36 fathers (58%) had jobs. In addition, 42% of the sample had no monthly income, 18% had a monthly income below 25,000 Yemeni Rails (1,000 YR equals $3.54 USD at the time of the data collection), 21% above 25,000 YR and 19% did not know what their monthly income was or did not want to share this information.

Procedure

Data was collected via a local non-governmental organization (NGO) working to achieve social justice with the aim of improving living conditions for the poor. The NGO was selected based on its already existing work in the selected slum settlements. This implied that once the NGO decided to terminate its own field work for security reasons because of the war taking place in Yemen, the data collection for this study would be terminated as well. The first author delivered training to the head of the NGO to do the recruitment and to conduct data collection for this study. After the training, the local NGO conducted four pilot family-field-visits to pilot the instruments and prepare for the recruitment of participants. Based on lengthy discussions and feedback from the NGO after the pilot field visits, the home visit procedure, the questionnaire, and the observational task were adapted to fit the cultural context of the participants.

The home visit consisted of three parts, a questionnaire, IQ test, and a naturalistic video-observation of a mother-child interaction. Because mothers in Yemen spend most of their daily life at home, it was agreed with them that data collection would becarried out at home. One home visit took between 2–3 hours. Due to the illiteracy rate among women in Yemen which is 65%, compared to 27% among men (UNFPA, 2017), the questionnaire was carried out in an interview format which was audio-taped. The questionnaire included questions on the families' background, demographic information, socioeconomic conditions, social support, and domestic violence. Questions were translated into Taizi, the local dialect of the Arabic language, and then back-translated to English by a local translator to avoid any translation errors across cultures. Domestic violence questionnaire was only administered to those who were married. Divorced and widow mothers were excluded.

For the video-based naturalistic observations, mothers and children were vid

eotaped for a 15-minute episode of a daily activity they usually do together. Mother-swere instructed to interact with their children as they would normally do. The naturalistic observation videos were later coded by a team of one trained rater from Yemen who spoke the language (the first author), and one expert western rater who used translation (the last author).

All participating mothers (and fathers in the case of two-parent families) signed informed consent forms for their own and for their child's participation in the study and were asked specifically if they agreed with audio and video recording of parts of the home visit. For those who could not read or write, the consent form was read out verbatim and their consent was videotaped. Families were compensated for the home visit by means of a small gift of the value of US$6.50 . However, in the very poor families, the NGO found it more appropriate to buy food items worth of the US$6.50 a gift. The study protocol was approved by the Ethics committee of the Institute of Education and Child Studies, Leiden University.

Measures

Parental Sensitivity. Parental sensitivity refers to mothers' ability to perceive child signals, to interpret these signals correctly, and to respond to them promptly and appropriately (Ainsworth, Bell, & Stayton, 1974). Maternal sensitivity was assessed using the Ainsworth Sensitivity scale (Ainsworth et al., 1974). Mothers were instructed to interact with their infants for 15 minutes as they would normally do. Interaction activ ities ranged from doing an activity like feeding their children, playing together, cooking, combing their children's hair, doing homework, or folding clothes to doing nothing and watching their children play with other kids. Intercoder reliability was determined by randomly selecting 15 videos which were coded by the first and last author. Intercoder reliability (intraclass correlations, absolute agreement, single rater) was high (.84).

Parental Education. We tested only parental education which was defined by the level of education mothers have achieved. Maternal level of education was measured in the interview on a 5-point scale ('0 = no education', '1= primary school', '2 = secondary school', '3 = high school', and '4 = college degree').

Maternal Intelligence Test. Raven's Progressive Matrices is a non-verbal pattern-com pletion test which is used throughout the world as an indicator of general intelligence (Raven, 2000). Raven's measure was selected in this study because of its non-verbal format, which is adequate for this study's sample where more than half of the mothers (53%) had no education at all, and because of its frequent international use (Vijver, 1997).

Raven's test consists of five sets of twelve matrices (total 60 patterns) presented in black and white, and increasing in level of difficulty. Because of our participants' low educational background, participants were presented with the first three sets only (36 patterns). Each pattern/matrix had a missing element that the participants had to identify. Participants were given as much time as they needed to complete this task. The total number of correct choices was used as the score indicating nonverbal IQ. Split-half estimate of reliability was .87. A total score was computed as the average of all items with higher scores indicating more intelligence.

Partner Conflict. The Conflict Tactics Scale (Straus, Hamby, Boney-McCoy & Sugarman, 1996). was used to measure the degree to which partners in romantic relationships psychologically or physically attack one another, and their use of reasoning or negotiation to deal with conflicts. The CTS has been applied to participants from different cultural backgrounds.This study used the short version of the scale which consisted of seven questions asking mothers to recall how certain conflicts with their partners were handled, e.g. "My husband or I threatened to hit or throw something at each other". Based on the pilot study, it was apparent that the 5-point scale as an answering format was too complex for the participants. Hence, the scale was adapted into a 3-point scale. Cronbach's alpha was .75. A total score was computed as the average of all items, with higher scores indicating more partner conflict.

Results

Bivariate Correlations

Preliminary analyses confirmed that assumptions of normality and linearity were not violated. Descriptive Statistics are presented in table 1. Bivariate correlations between all variables in the current study are shown in Table 2. Parental education was significantly positively correlated with maternal sensitivity and maternal intelligence

and was negatively correlated with partner conflict. Higher educated mothers were more sensitive, more intelligent and experienced less partner conflict. On the other hand, partner conflict correlated negatively with all other variables: maternal sensitivity, education and maternal intelligence. Mothers who experienced more partner conflict showed lower sensitivity, were lower educated and had lower intelligence scores. While maternal intelligence was not significantly associated with maternal sensitivity, it was positively asso ciated with parental education and negatively associated with partner conflict. Mothers who scored high on the IQ measure were more educated and had less partner conflict.

Table 1. Descriptive Statistics (N = 62)

	n	%
Parental education		
No education	33	53
Primary education	10	16
Secondary or high school	16	26
College degree	3	5
Marital status		
Married	55	89
Divorced	3	5
Widowed	4	6
Child age		
24 - 37 months	32	52
37 - 60 months	30	48
Gender (% girls)	32	52
Number of siblings		
No siblings	10	16
One sibling	13	21
Two	13	21
Three	10	16
Four or more	16	26
Working mothers	0	0
Working fathers*	36	58
Family income**		
No monthly income (as reported by mothers)		
Income below 25,000 YR	11	18
Income above 25,000 YR	13	21
Unknown or not shared	12	19

**N = 36 out of 55 fathers because of divorced mothers and deceased husbands*

***1,000 Yemeni Rails (YR) equals $3.54 USD at the time of the data collection*

Table 2. Pearson correlations between all variables

	1	2	3	4
1. Parental Education	-			
2. Maternal Intelligence	.462**	-		
3. Partner Conflict	-.340**	-.328**	-	
4. Maternal Sensitivity	.411**	.213	-.316*	-

**p < 0.05, ** p < 0.01*

Parental Education and Intelligence Predicting Maternal Sensitivity

Next, a standard linear regression analysis was performed to test parental education and maternal intelligence as predictors of maternal sensitivity simultaneously. Results of the regression analysis are presented in Table 3. The regression model was found to be significant, $F(2.59) = 6.03$, $p = .004$, with an R^2 of .170. Looking into individual predictors, only parental education was a significant predictor of maternal sensitivity, $\beta = .30$, $p < .004$. Maternal intelligence was not a significant predictor of maternal sensitivity.

Table 3. Regression model testing contribution of parental education and maternal intelligence in the prediction of maternal sensitivity

	β	*t*	*p*
Constant		3.50	.001
Parental education	.40	2.97	.004
Maternal intelligence	.03	.218	.828

*$R^2 = .170$ *p < 0.05*

Testing Mediation

To examine our main research question and based on the correlations between the variables, a mediation analysis was conducted to assess whether partner conflict fully or partially mediated the relation between parental education and maternal sensitivity. In this analysis, the predictor variable was parental education, the mediator was partner conflict and the outcome variable was maternal sensitivity (see Figure 1). Parental education correlated positively with maternal sensitivity, $r(60) = .41$, $p < .001$. Parental education also correlated negatively with partner conflict, $r(60) = .34$, $p < .007$, and

partner conflict correlated negatively with maternal sensitivity, $r(60) = .32$, $p < .012$. The indirect effect from parental education to maternal sensitivity through partner conflict was tested using a percentile bootstrap estimation approach with 10,000 samples (Shrout & Bolger, 2002), implemented with the PROCESS macro Version 3 (Hayes, 2017). The results indicate that the indirect effect was significant, $\beta = .13$, $SE = .09$, 95% $CI = .0023$ - $.3506$, providing support for the partial mediational role of partner conflict in the relation between parental education and maternal sensitivity. Educated mothers had less partner conflict which in turn related to higher levels of sensitivity to their children.

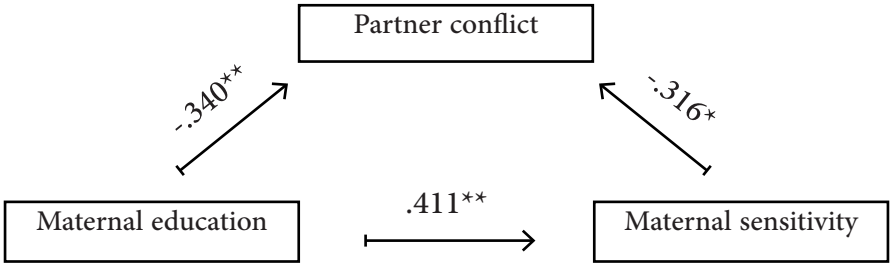

Figure 1. Partner conflict partially mediates the relation between parental education and maternal sensitivity

Discussion

This study examined parental education and intelligence in relation to observed parental sensitivity among mothers of 2-6-year-old Yemeni children living in slum areas. It also examined the mediational role of partner conflict in those associations. Results revealed that mothers' level of education rather than their level of intelligence was a predictor of their level of sensitivity towards their children. Findings also suggested a mediational role of partner conflict in the relation between parental education and parental sensitivity. Specifically, low educated mothers reported more partner conflict which was in turn associated with less maternal sensitive behaviors towards their children's.

Previous research reporting associations between maternal sensitivity on the one hand and maternal education and intelligence on the other hand is based mainly on Western samples, but in most cases education and intelligence are highly correlated so it is unclear whether the interpretation of the association with maternal sensitivity should

be found in the educational area or intelligence area. Our finding that education but not intelligence is related to maternal sensitivity supports our hypothesis that these characteristics reflect more distinct variables in developing countries. We found that in the Yemeni slum context, education is the driving factor in the association with maternal sensitivity and not intelligence, which is in line with previous literature on Western samples (Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004; Pederson, Moran, Sitko, Campbell, Ghesquire & Acton, 1990). Mothers with no education or a low level of education are more likely to use more authoritarian and harsher parenting styles than mothers with higher levels of education, which is manifested by more physical punishment and the absence of reasoning with children (Hoff, Laursen, Tardif & Bornstein, 2002).). Less educated mothers spend less time with their children in comparison to educated mothers for several reasons, such as having more children (Guryan, Hurst & Kearney, 2008), lacking the educational background to provide educational care for their children (Robinson and Godbey, 1999), or lacking the vision that time spent with their children is as an investment in their children's future (Guryan et al.,2008). Because of their increased knowledge provided by their education, educated mothers are less likely to perceive their children as difficult as they are better able to offer support according to the child's needs at a particular task (Neitzel & Dopkins Stright, 2004). Another explanation for the association between education and sensitivity may be that uneducated mothers have less access to materials on parenting provided at school or booklets and brochures received from motherhood and childhood centers (Yemeni association for Reproductive Health, 2017). Even in the case of obtaining that information, it is likely that uneducated mothers cannot process the information as much as mothers who have been schooled and are more experienced in systematic information processing (Huq & Tasnim, 2008; Mechanic, 1992). Moreover, while uneducated mothers might attain their parenting skills and information from their parents, relatives, neighbors or friends, educated mothers might attain that information by mingling in a broader social context where they meet other educated women with whom they discuss issues related to parenting.

Furthermore, we showed that general high intellectual capacity apparently does not make the difference in sensitivity. In the slum context both low and high intelligent mothers might have trouble accessing important parenting resources and are less aware of their roles in child development. In telligent mothers are not necessarily educated, and due to a lack of access to education could even be illiterate in spite of their

general intellectual capacity. It appears to require education to use intellectual capacity productively in daily life so that one can have ability to engage in functional conversation and to solve intellectual and day-to-day problems (Gore, Griffiths & Ladwig, 2002). Moreover, even though some literature showed that maternal intelligence was associated with better home environments, apparently, it can be due to the notion that maternal intelligence may be acting as an indirect measure of maternal education which could be the true casual influence in the relationship (Hadd & Rodgers, 2017).

Our finding that partner conflict mediates the association between maternal education and maternal sensitivity was in line with previous literature. Earlier studies have shown that lower levels of educational attainment are associated with less marital stability (Heaton, 2002; Martin, 2006; Orbuch, et al., 2002), including a higher risk for physical and/or sexual intimate partner violence (Bangdiwala et al., 2004; Ismayilova et al., 2013; Jeyaseelan et al., 2004). This association could be explained by the notion that education enables women to protect themselves from intimidation and physical violence through their capacity to think through problems and arriving at solutions in a more amicable manner (Jeyaseelan, et al., 2004) and have greater decision-making power (Cleland & Van Ginneken, 1988).

Studies also showed that mothers who experience low levels of marital support are likely to provide less supportive environments for their children (Belsky, 1984; Conger et al., 1990), and that mothers who experience intimate partner conflict show lower levels of parenting warmth (Levendosky et al., 2000, 2001). The higher level of stress that is associated with partner conflict may constrain mother's ability to be sensitive to her child (Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006), and hostility and anger experienced in marital relationship can spill over into more hostile and angrier parenting (Levendosky, et al., 2006).

Our findings put emphasis on the important role that maternal education rather than intelligence plays in maternal sensitivity. This implies that education in poor contexts such as in the Yemeni slums is essential not only in women's lives by helping them to manage their relationship with their partner, but also in interaction with their children which ultimately will influence the next generation's abilities to negotiate relationships and parenting as well (Perren, Von Wyl, Bürgin, Simoni, & Von Klitzing, 2005; Belsky, Jaffee, Sligo, Woodward, & Silva, 2005). Realizing the crucial role of education in the lives of girls and women, and based on the UN development goal of ensuring inclu

sive and equitable quality education, the Yemeni ministry of education along with its national and international partners have established a girls education sector within the ministry (Ministry of Education, 2016). The main aims of the sector is to increase girls' enrollment in schools by increasing the number of female teachers (World Bank, 2013), providing conditional stipends to disadvantaged families (Global Partnership for Education, 2017), and improving the education level at the primary level (USAID Woronowycz, 2012).

A number of limitations in the interpretation of these study findings need to be considered. First, it is important to highlight that this study is a cross-sectional study and therefore it is not possible to draw conclusions about causality. Longitudinal studies and experimental studies are needed to disentangle both direction and causality of the associations described in the current study, as well as explore potential third variables, such as childhood experiences, that might be at the core of all of the variables studied here. Second, the sample used for this study was relatively small. The sample size was restricted to 62 families because of the security status of the study location (Alsarhi, Rahma, Alink, Prevoo & Mesman, 2018). However, for such a unique sample, this number can be considered a valuable start in the parenting research in slum areas where video-taping fully covered women was a challenge. Another limitation is that partner conflict was only assessed through reports by mothers and not reported by their husbands. This leaves the partner conflict picture incomplete. A multi-informant approach would have reduced the risk of social desirability bias. However, the local NGO staff who conducted data collection for this study had a long-term work relationship with the participants, which made mothers feel quite comfortable to share private information and thus may lessen theextent of socially desirable answers. A final limitation is the lack of information on the educational level of the mothers' partners. For example, if data had been gathered on the level of education of the partners, it would have been possible to examine associations between fathers' education and partner conflict.

The current study however, has many strong points to be highlighted. First, this study is unique as it used a standardized observational measure which was done for the first time in a culture where women are fully covered and filming of women is a taboo (Alsarhi, Rahma, Alink, Prevoo & Mesman, 2018). Second, this study used a mul tiple methods in addition to standardized observations, including a questionnaire where women reported their marital conflict and a standardized test where mothers' level of

intelligence was measured. Third, this study showed the unique association between parental education on parental sensitivity in a developing country context where education is not (easily) accessible to everyone and education and intelligence are more distinct constructs compared to Western countries with compulsory and accessible education for everyone.

Taken together, our findings suggest that partner conflict plays an important mediational role in the association between parental education and parental sensitivity. The findings from other research (Jewkes, 2002), and our own findings suggest that there is a need for improving the level of literacy of adult women and for girls' education as a preventive mechanism for illiteracy among women which in turn is a mean to prevent family problems as well. Future research should be carried out to then test the effectiveness of such measures to diminish intimate partner conflict and improve maternal sensitivity. In addition, intervention programs can be introduced to help both the mothers and their partners to develop more effective communication in general, and during partner conflict in particular, support parents in supporting their children during partner conflict episodes, and help parents to acquire more sensitive parenting skills. Future research can also focus on exploring the effects of education and intelligence on maternal sensitivity in developing countries and how these might differ from findings in the Western context.

References

Ainsworth, M. D. S., Bell, S. M., & Stayton, D. F. (1974). Infant-mother attachment and social development: Socialization as a product of reciprocal responsiveness to signals.

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). Wall. s.(1978). Patterns of attachment: *A psychological study of the strange situation, 18.*

Alsarhi, K., Rahma, Prevoo, M. J., Alink, L. R., & Mesman, J. (2018). Observing sensitivity in slums in Yemen: The veiled challenge. *Attachment & human development, 1-9.*

Alyahri, A., & Goodman, R. (2008). Harsh corporal punishment of Yemeni children: Occurrence, type and associations. *Child Abuse & Neglect, 32(8), 766–773.*

Anwar, J. (2015). The reality of domestic abuse in Yemen. *National Yemen. National Yemen Newspaper.* Retrieved from https://nationalyemen.com/2013/02/24/the-reality-of-domestic-abuse-in-yemen/

Baker, K. A. (2003). Marital problems among Arab families: Between cultural and family therapy interventions. *Arab Studies Quarterly, 53-74.*

Bacharach, V. R., & Baumeister, A. A. (1998). Effects of maternal intelligence, marital status, income, and home environment on cognitive development of low birth weight infants. *Journal of Pediatric Psychology, 23(3), 197-205*.

Baharudin, R., & Luster, T. (1998). Factors related to the quality of the home environment and children's achievement. *Journal of Family Issues, 19(4), 375-403*.

Bakermans-Kranenburg, M. J., Van Ijzendoorn, M. H., & Juffer, F. (2003). Less is more: meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological bulletin, 129(2), 195.*

Bangdiwala, S. I., Ramiro, L., Sadowski, L. S., Bordin, I. A., Hunter, W., & Shankar, V. (2004). Intimate partner violence and the role of socioeconomic indicators in WorldSAFE communities in Chile, Egypt, India and the Philippines. *Injury control and safety promotion, 11(2), 101-109.*

Belsky, J. (1984). The determinants of parenting: A process model. *Child development, 83-96.*

Belsky, J., & Fearon, R. P. (2002). Early attachment security, subsequent maternal sensitivity, and later child development: Does continuity in development depend upon continuity of caregiving?. *Attachment & Human Development, 4(3), 361-387*.

Belsky, J., Jaffee, S. R., Sligo, J., Woodward, L., & Silva, P. A. (2005). Intergenerational transmission of warm-sensitive-stimulating parenting: A prospective study of mothers and fathers of 3-year-olds. *Child development, 76(2), 384-396*.

Bianchi, S. M., & Robinson, J. (1997). What did you do today? Children's use of time, family composition, and the acquisition of social capital. *Journal of Marriage and the Family, 332-344.*

Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education), 21(1), 33-46.*

Bradley, R. H., & Corwyn, R. F. (2002). *Socioeconomic status and child development. Annual review of psychology, 53(1), 371-399.*

Carneiro, P., Meghir, C., & Parey, M. (2013). Maternal education, home environments, and the development of children and adolescents. *Journal of the European Economic Association, 11(suppl_1), 123-160.*

Cleland, J. G., & Van Ginneken, J. K. (1988). Maternal education and child survival in developing countries: the search for pathways of influence. *Social science & medicine, 27(12), 1357-1368.*

Conger, R. D., Elder Jr, G. H., Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., ... & Melby, J. N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family, 643-656.*

Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annu. Rev. Psychol., 58, 175-199.*

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family, 72(3), 685-704.*

Dakin, J., & Wampler, R. (2008). Money doesn't buy happiness, but it helps: Marital satisfaction, psychological distress, and demographic differences between low-and middle-income clinic couples. The American Journal of Family Therapy, 36(4), 300-311.

Deary, I. J., Strand, S., Smith, P., & Fernandes, C. (2007). Intelligence and educational achievement. *Intelligence, 35(1), 13-21.*

Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1996). Physical discipline among African American and European American mothers: Links to children's externalizing be haviors. *Developmental Psychology, 32(6), 1065.*

Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach–Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence?. *Child development, 74(1), 238-256.*

Diehl, K. (1997). Adolescent mothers: what produces positive mother-infant interaction?. MCN: The American Journal of Maternal/*Child Nursing, 22(2), 89-95.*

Dutton, D. G., & Strachan, C. E. (1987). Motivational needs for power and spouse-specific asser tiveness in assaultive and nonassaultive men. *Violence and victims, 2(3), 145.*

El-Bassel, N., Gilbert, L., Terlikbayeva, A., Wu, E., Beyrer, C., Shaw, S., ... & Tukeyev, M. (2013). HIV among injection drug users and their intimate partners in Almaty, Kazakhstan. *AIDS and Behavior, 17(7), 2490-2500.*

Ensminger, M. E., Fothergill, K. E., Bornstein, M. H., & Bradley, R. H. (2003). A decade of measuring SES: What it tells us and where to go from here. *Socioeconomic status, parenting, and child development, 13, 27.*

European commission (2019). Recommended annual instruction time in full-time compulsory education in Europe. EU publication. Retrieved from https://publications.europa.eu/en/publication-detail/-/publication/9fdd536a-6eb8-11e8-9483-01aa75ed71a1/language-en/format-PDF/source-71779345

Faisal Darem, (2014). Yemeni Women's Uphill Struggle for Education. *Al-Fanar Media Covering Education,* Research and Culture. Retrieved fromhttps://www.al-fanarmedia.org/2014/06/yemeni-womens-uphill-struggle-education/Fanack of the Middle East and Africa (2016). Yemen. Retrieved from https://chronicle.fanack. com//population

Focus Economics, 2018. The Poorest Countries in the World. Focus Economics, Economic Forecasts from the World's Leading Economists. Retrieved from https://www.focus-economics.com/blog/the-poorest-countries-in-the-world Gautier, A. (2005). Legal regulation of marital relations: an historical and comparativeapproach. *International Journal of law, policy and the family, 19(1), 47-72.*

Global Partnership for education (2017). GPE statement at the high-level pledging event for the humanitarian crisis in Yemen. Retrieved from https://www.globalpartnership.org/news-and-media/news/gpe-statement-high-level-pledging-event-humanitarian-crisis-yemen

Gore, J. M., Griffiths, T., & Ladwig, J. G. (2002, December). Exploring 'productive pedagogy'as a framework for teacher learning. In *Annual Meeting of the Australian Association for Research in Education, Brisbane, Australia.*

Groh, A. M., Fearon, R. P., Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., Steele, R. D.,

& Roisman,G. I. (2014). The significance of attachment security for children's social competence with peers: A meta-analytic study. *Attachment & human development, 16(2), 103-136.*

Guryan, J., Hurst, E., & Kearney, M. (2008). Parental education and parental time with children. *Journal of Economic perspectives, 22(3), 23-46.*

Hadd, A. R., & Rodgers, J. L. (2017). Intelligence, income, and education as potential influences on a child's home environment: A (maternal) sibling-comparison design. *Developmental psychology, 53(7), 1286.*

Hayes, A. F. (2017). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Publications

Heaton, J. B. (2002). Managerial optimism and corporate finance. *Financial management, 33-45.*

Hibel, L. C., Granger, D. A., Blair, C., Cox, M. J., & Family Life Project Key Investigators. (2011). Maternal sensitivity buffers the adrenocortical implications of intimate partner violence exposure during early childhood. *Development and Psychopathology, 23(2), 689-701.*

Hoff, E., Laursen, B., Tardif, T., & Bornstein, M. (2002). Socioeconomic status and parenting. Handbook of parenting Volume 2: *Biology and ecology of parenting, 8(2), 231-52.*

Hunt, E., & Carlson, J. (2007). Considerations relating to the study of group differences in intelligence. *Perspectives on Psychological Science, 2(2), 194-213.*

Huq, M. N., & Tasnim, T. (2008). *Maternal education and child healthcare in Bangladesh. Maternal and child health journal, 12(1), 43-51.*

Ismayilova, L., & El-Bassel, N. (2013). Prevalence and correlates of intimate partner violence by type and severity: Population-based studies in Azerbaijan, Moldova, and Ukraine. *Journal of interpersonal violence, 28(12), 2521-2556.*

Ispa, J. M., Fine, M. A., Halgunseth, L. C., Harper, S., Robinson, J., Boyce, L., ... & Brady-Smith, C. (2004). Maternal intrusiveness, maternal warmth, and mother–toddler relationship outcomes: Variations across low-income ethnic and acculturation groups. *Child development, 75(6), 1613-1631.*

Jewkes, R. (2002). Intimate partner violence: causes and prevention. *The lancet, 359(9315), 1423-1429*

Jeyaseelan, L., Sadowski, L. S., Kumar, S., Hassan, F., Ramiro, L., & Vizcarra, B. (2004). World studies of abuse in the family environment–risk factors for physical intimate partner violence. *Injury Control and Safety Promotion, 11(2), 117-124.*

Khoury, N. F., & Moghadam, V. M. (Eds.). (1995). *Gender and development in the Arab world: women's economic participation: patterns and policies*. United Nations University Press.

Krieger, N., Williams, D. R., & Moss, N. E. (1997). Measuring social class in US public health research: concepts, methodologies, and guidelines. *Annual review of public health, 18(1), 341-378.*

Lackner, H. (1995). Women and Development in the Republic of Yemen. *Gender and Development in the Arab World: Women's Economic Participation: Patterns and Policies, 71-96.*

Ledermann, T., Bodenmann, G., Rudaz, M., & Bradbury, T. N. (2010). Stress, communication, and marital quality in couples. *Family Relations, 59(2), 195-206.*

Levendosky, A. A., & Graham-Bermann, S. A. (2000). Behavioral observations of parenting in battered women. *Journal of Family Psychology, 14(1), 80.*

Levendosky, A. A., & Graham-Bermann, S. A. (2001). Parenting in battered women: The effects of domestic violence on women and their children. *Journal of family violence, 16(2), 171-192.*

Levendosky, A. A., Leahy, K. L., Bogat, G. A., Davidson, W. S., & von Eye, A. (2006). Domestic violence, maternal parenting, maternal mental health, and infant externalizing behavior. *Journal of Family Psychology, 20(4), 544.*

LeVine, R. A., LeVine, S. E., Richman, A., & Correa, C. S. (1987). Schooling and maternal behavior in a Mexican city: the effects on fertility and child survival.

Lövdén, M., Ghisletta, P., & Lindenberger, U. (2004). Cognition in the Berlin Aging Study (BASE): the first 10 years. *Aging Neuropsychology and Cognition, 11(2-3), 104-133.*

Lynn, R., Vanhanen, T., & Stuart, M. (2002). *IQ and the wealth of nations*. Greenwood Publishing Group.

Martin, S. P. (2006). Trends in marital dissolution by women's education in the United States. *Demographic research, 15, 537-560.*

McLoyd, V. C., Cauce, A. M., Takeuchi, D., & Wilson, L. (2000). Marital processes and parental socialization in families of color: A decade review of research. *Journal of Marriage and Family, 62(4), 1070-1093.*

Mechanic, D. (1992). Research possibilities on facilitating the health care transition. *Chen, L., Kleinman, A. & Ware, N. Advancing Health in Developing Countries: The Role of Social Research Centre for Population Studies, Harvard University, Auburn House, New York.*

Menaghan, E. G., & Parcel, T. L. (1991). Determining children's home environments: The impact

of maternal characteristics and current occupational and family conditions. *Journal of Marriage and the Family, 417-431.*

Mesman, J., van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2012). Unequal in opportunity, equal in process: Parental sensitivity promotes positive child development in ethnic minority families. *Child Development Perspectives, 6(3), 239-250.*

Mills-Koonce, W. R., Gariépy, J. L., Propper, C., Sutton, K., Calkins, S., Moore, G., & Cox, M. (2007). Infant and parent factors associated with early maternal sensitivity: A caregiver-attachment systems approach. *Infant Behavior and Development, 30(1), 114-126.*

Ministry of Education, (2016). Girls' education sector.Yemen. Retrieved from http:// www.yemenmoe.net/department.aspx

Neisser, U., Boodoo, G., Bouchard Jr, T. J., Boykin, A. W., Brody, N., Ceci, S. J., ... & Urbina, S. (1996). Intelligence: Knowns and unknowns. *American psychologist, 51(2), 77.*

Neitzel, C., & Dopkins Stright, A. (2004). Parenting behaviours during child problem solving: The roles of child temperament, mother education and personality, and the problem-solving context. *International Journal of Behavioral Development, 28(2), 166-179.*

Office of the High Commissioner for Human Rights, (2017). Girls not brides. Child marriage in humanitarian settings. The global Partnership to End Child Marriage. OHCHR. August, 2017. Retrieved from https://www.ohchr.org/Documents/Issues/Children/Humanitarian Situations/Girl sNotBrides.pdfOrbuch, T. L., Veroff, J., Hassan, H., & Horrocks, J. (2002). Who will divorce: A 14-year longitudinal study of black couples and white couples. *Journal of Social and Personal Relationships, 19(2), 179-202.*

Pederson, D. R., Moran, G., Sitko, C., Campbell, K., Ghesquire, K., & Acton, H. (1990). Maternal sensitivity and the security of infant-mother attachment: A Q-sort study. *Child development, 1974-1983.*

Perren, S., Von Wyl, A., Bürgin, D., Simoni, H., & Von Klitzing, K. (2005). Depressive symptoms and psychosocial stress across the transition to parenthood: Associations with parental psychopathology and child difficulty. *Journal of Psychosomatic Obstet rics & Gynecology, 26(3), 173-183.*

Peterson, D. R. (1983). Conflict. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson (Eds.), Close relationships (pp. 360–396). New York: Freeman

Raven J. The Raven's Progressive Matrices: *Change and stability over culture and time. Cognitive Psychology. 2000; 41:1–48. doi: 10.1006/cogp.1999.0735.*

Richardson, K. (2004). *IQ and the Wealth of Nations.*

Rindermann, H. (2008). Relevance of education and intelligence at the national level for the economic welfare of people. *Intelligence, 36(2), 127-142.*

Robinson, J. P., & Godbey, G. (1999). Time for Life. State College.

Ruben, B. (1978). Communication and conflict: A systems perspective. *Quarterly Journal of Speech, 64, 202–210.*

Shin, H., Park, Y. J., & Kim, M. J. (2006). Predictors of maternal sensitivity during the early postpartum period. *Journal of Advanced Nursing, 55(4), 425-434.*

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological methods, 7(4), 422.*

Stelzl, I., Merz, F., Ehlers, T., & Remer, H. (1995). The effect of schooling on the development of fluid and crystallized intelligence: A quasiexperimental study. *Intelligence, 21, 279 –296. doi:10.1016/0160- 2896(95)90018-7*

Stevenson, D. L., & Baker, D. P. (1987). The family-school relation and the child's school performance. *Child development, 1348-1357.*

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *Journal of family issues, 17(3), 283-316.*

Straus, M. A., & Douglas, E. M. (2004). A short form of the revised conflict tactics scales, and typologies for severity and mutuality. *Violence and Victims, 19(5), 507*-20. Retrieved from https://search.proquest.com/docview/208520517?accountid=12045

Tamis-LeMonda, C. S., Shannon, J. D., Cabrera, N. J., & Lamb, M. E. (2004). Fathers and mothers at play with their 2-and 3-year-olds: contributions to language and cognitive development. *Child development, 75(6), 1806-1820.*

Tamis-LeMonda, C. S., Briggs, R. D., McClowry, S. G., & Snow, D. L. (2009). Maternal control and sensitivity, child gender, and maternal education in relation to children's behavioral outcomes in African American families. *Journal of applied developmental psychology, 30(3), 321-331.*

United Nations Development Programme, (2010). Human Development Report: *The Real Wealth of Nations: Pathways to Human Development.* NY, UNDP. Retrieved from hdr.undp.org/sites/default/files/reports/270/hdr_2010_en_complete_reprint.pdf

United Nations Development Programme, 2016. Human Development Report 2016 – *Human Development for Everyone*. NY, USA. Retrieved from hdr.undp.org/sites/default/files/2016_

human_development_report.pdfUNFPA, (2017), The United Nations Population Fund [online] Available at:<http://yemen.unfpa.org/about-yemen#sthash.bVf2GsP9.dpuf> [Accessed on 16 May, 2017]

United Nations Girls Education Initiative (2013). Yemen: Educating Girls. Retrieved from http://www.ungei.org/news/yemen_2297.html

United Nations International Children's Emergency Fund (2012). Promoting girls' education in Yemen *UNICEF,* New York, April 2012. Retrieved from https://www.unicef.org/education/yemen_25167.html

United Nations International Children's Emergency Fund (2017). Falling through the cracks: The Children of Yemen. *UNICEF*, New York, March 2017. Retrieved from https://www.unicef.org/videoaudio/PDFs/Yemen2Yearschildren_falling_through_the_cracks_FINAL.pdf

USAID Woronowycz (2012). Girls in Front Row of Yemen's New Education Drive. Retrieved from https://2012-2017.usaid.gov/news-information/frontline youth-mobile-technology/girls-front-row yemen%E2%80%99s-new-educa tion-drive-0

Vijver, F. V. D. (1997). Meta-analysis of cross-cultural comparisons of cognitive test performance. *Journal of Cross-Cultural Psychology, 28(6), 678-709*.

Vitacco, M. J., Neumann, C. S., & Wodushek, T. (2008). Differential relationships between the dimensions of psychopathy and intelligence: Replication with adult jailinmates. *Criminal Justice and Behavior, 35(1), 48-55.*

Volken, T. (2005). The Impact of National IQ on Income and Growth.Walling, S. M., Meehan, J. C., Marshall, A. D., Holtzworth-Munroe, A., & Taft, C. T. (2012). The relationship of intimate partner aggression to head injury, executive functioning, and intelligence. *Journal of marital and family therapy, 38(3), 471-485.*

Wechsler, D. (1944). The measurement of adult intelligence. Baltimore: Williams and Wilkins, 1944. *Google Scholar.*

White, K. R. (1982). The relation between socioeconomic status and academic achievement. *Psychological bulletin, 91(3), 461.*

Wicherts, J. M., Dolan, C. V., & van der Maas, H. L. (2010). A systematic literature review of the average IQ of sub-Saharan Africans. *Intelligence, 38(1), 1-20.*

Williams, R. L. (2013). Overview of the Flynn effect. *Intelligence, 41(6), 753-764.*

World Bank Report (2002). World Bank annual report 2002 : Main report (English). Retrieved from: http://documents.worldbank.org/curateden/379051468163155729/Main-report.

World Health Organization. (2012). Understanding and addressing violence against women:

intimate partner violence.

Women National Committee, (2010). Country assessment on violence against women, Yemen. Retrieved from http://www.un.org/womenwatch/ianwge/taskforces/vaw/Country_Assessment_on_Violence_against_Women_August_2_2010.pdf

World Data Atlas (2016). Yemen - Total fertility rate. Retrieved from https://knoema.com/atlas/Yemen/Fertility-rate

Yeates, K. O., MacPhee, D., Campbell, F. A., & Ramey, C. T. (1983). Maternal IQ and home environment as determinants of early childhood intellectual competence: A developmental analysis. *Developmental Psychology, 19(5), 731.*

Yemeni Association for Reproductive Health (Yara), 2017. الجمعية اليمنية للصحة الانجابية. Yemeni association for reproductive health. Retrieved from https://www.yarh.org/?p=994