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Observing sensitivity in slums in Yemen: the veiled challenge

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ABSTRACT

This study represents the first video observation of parenting practices conducted in Yemen, where women are generally fully veiled, showing only their eyes, in the presence of strangers. A total of 62 mothers and children (aged 2–6 years) were filmed in their homes for 15 minutes during free interaction. The mothers' veils did not hamper the coding of sensitivity. Consistent with the socioeconomically deprived context, average sensitivity levels were low, but over 25% of mothers were rated as (very) sensitive. Mothers with a higher educational level and those experiencing more social support were more sensitive. About half of the mothers had their child perform household chores, which was related to lower sensitivity. Observations revealed frequent looking at the camera. Almost half of the mothers verbally expressed insecurity about the videotaping, and a third expressed awareness of being filmed. Interestingly however, these behaviors were unrelated to Ainsworth ratings of maternal sensitivity.

KEYWORDS

maternal sensitivity; Yemen; slums; video observation

The country of Yemen provides a particularly interesting cultural context for the video observation of caregiver sensitivity "off the beaten track", because most women cover their bodies with long black robes, their heads with a hijab and some cover their faces with a veil as part of their culture and religion when they are outside their homes, but also at home when strangers are visiting. Further, children spend most of their time outside without their mothers (who remain inside) and can thus not easily be filmed in naturalistic dyadic interaction. As part of a larger study on parenting in relation to culture and poverty, the current study examines the feasibility and implications of using video to measure maternal sensitivity in the veiled context of Yemeni slums.

Maternal sensitivity

The notion of maternal sensitivity is a central part of attachment theory, and was first formulated by Mary Ainsworth based on her research on mothers and their children in Uganda (Ainsworth, 1967). According to Ainsworth et al. (1978) maternal sensitivity is defined as a mother's ability to accurately perceive and interpret her infant's signals and communications and then respond appropriately. The research literature documents comprehensive support for the relation between early maternal sensitivity and the

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security of the attachment relationship (e.g., Atkinson et al., 2005; Bakermans-Kranenburg et al., 2003; Campbell et al., 2004; Meins et al., 2001), but also other positive child outcomes (e.g., better social and cognitive skills (Stams et al., 2002), problem behavior, expressive and receptive language, and school readiness (Belsky & Fearon, 2002). Maternal education and social support are two important factors that are found to be associated with maternal sensitivity. Studies show that mothers' educational level is associated with sensitive parenting of their children and that mothers with more years of education were more sensitive and less intrusive toward their children (Garcia Coll & Meyer, 1993; Pederson et al., 1990; Tamis-LeMonda et al., 2004). Similarly, literature demonstrated a decrease in maternal sensitivity over the course of time for mothers with low social support (Shin et al., 2006). In addition, mothers who experienced social support were more sensitive to their children than mothers who had lower social support (Goldstein et al., 1996; Kivijärvi et al., 2004). In this study we aim to find out if maternal sensitivity in the Yemeni context would yield similar associations with the above-discussed factors, namely; maternal education and maternal social support.

The Yemeni context

Formerly divided into two nations, North and South Yemen, the Republic of Yemen is located at the southwest tip of the Arabian Peninsula. The two countries united in May 1990 and became a constitutional republic. The Yemeni population, which is mainly of tribal origin (Fanak, 2016), is predominantly Muslim of whom 70% follow the mainstream Sunni Islam while 30% are Shiite (Armanios, 2004) who follow the Zaidi branch of mainstream Shiism. Family size is the highest among countries in the Middle East and North Africa's regions, with a fertility rate of 6.2 in 2005 (Roudi-Fahimi & Kent, 2007), which needs to be seen in light of the high infant mortality rate standing at 43 deaths per 1,000 live births (Ministry of Public Health and Population & Population Central Statistical Organization, 2013), which is substantially higher than elsewhere in the region. Since 2015, Yemen which is already one of the Arab world's poorest countries (ranking 133 out of 169 countries in the Human Development Index; UNDP, 2010) has been shattered by civil war. Yemen is now experiencing the world's largest humanitarian crisis where 82% of its population needs humanitarian assistance and protection. The current study took place in slum areas in Taiz governate, and was conducted before war activities threatened safety in this area as part of a larger study on socioeconomic deprivation and parenting. The informal settlements in Taiz governate are characterized by extreme poverty, lack of education, bad housing conditions, overcrowding, poor health, and exclusion from employment opportunities, political representation and legal and social protections (World Bank, 2006).

In Yemeni culture, the family is the center of life. Like in most Arabic countries, it is through the family institution that religion, social class, and cultural identities are inherited (Barakat, 2005). Consistent with the situation in the Middle East and Northern African regions (Roudi-Fahimi & Kent, 2007), marriage, childbearing, and child rearing in Yemen define life for nearly all women. Nevertheless, little is known so far on the nature of maternal caregiving in this context, because observational studies of parenting in the Arab world are limited and are non-existent in Yemen. The few studies on parenting in Yemen reported extensive use of corporal punishment (Alyahri & Goodman, 2008),

psychological aggression by caregivers such as yelling at the child or calling the child an insulting name (Lansford & Deater-Deckard, 2012), and punishment as parents' main style of discipline (Al-Thabhani, 2004). However, there is also evidence that parenting in Yemen shows mixed and inconsistent patterns of permissive and authoritarian styles, which may be due to the increasing influence of Western culture on the Yemeni tribal system (Dwairy et al., 2006).

The current study represents the first video-observation of parenting practices to be conducted in Yemen. It provides a rare opportunity of observing parenting closely in a culture where filming women is a taboo and having a video camera at home to film women is a great challenge. Women are usually less active in the public sphere, and cover their bodies and faces when they are outside their homes and specifically when men are around. This includes women putting the veil on also at home if there are men present other than men from the immediate family. Therefore, children are used to seeing their mothers always veiled outside the home and sometimes at home. With that veiled context, many challenges may arise in the observation process of this study. In addition to the main challenge of mothers only showing their eyes in the video observations, it is expected that women will only be filmed at home because it provides them the privacy they need. However, in everyday life, children usually spend a lot of time playing in the streets, rather than in the home. When filming interactions between mothers and children the challenge is to create settings in the home that do resemble daily life interactions. The goal of this study is to examine the feasibility of assessing maternal sensitivity using video within these constraints, and to investigate whether maternal sensitivity scores thus obtained would be meaningfully related to other parenting dimensions and social-economic factors.

Method

Sample

Participants were recruited via a local NGO working in the Taiz governate slums aiming to achieve social justice through projects that can create equal employment opportunities, reduce unemployment and improve living condition for the poor. An employee of the NGO conducted data collection for this study as part of the NGO's current work in the slums. After 2 months of data collection, the NGO decided to terminate its own field work in the slums for security reasons associated with the current war in Yemen. This of course also meant the end of their work for this research project. The NGO recruited local facilitators to help recruit new families. Local facilitators were women from the community who could facilitate the introduction of the NGO and the research project to potential participants. Mothers were informed about the research project and its objectives of learning more about family life and child development in Yemen. Afterwards, mothers were asked for their initial consent. Mothers were included if they had been living in the slum area for at least 6 months, and had at least one child between 2 and 6 years of age. The final sample consisted of 62 mother-child dyads (52% girls), with a response rate of 60%, which is high for a study centered around video observations in the home. The study protocol was approved by the ethics committee of Leiden University.

It proved to be impossible to determine maternal age as most of the mothers did not know how old they were. Mothers did know their children's birth dates. The participating children's mean age was 38.69 months (*SD* = 10.09; Range = 24 to 60 months). About 40% of the children were under 36 months old, and about 25% of children were 4 to 6 years old. Only half of mothers could read and write, and more than half of the mothers (53%) had no education at all, 16% completed only primary school, 26% completed secondary or high school, and 5% had a college degree. The average number of children in the families was 3.19 (range: 1–10). None of the mothers had a job. Three mothers were divorced, four were widows and 55 were married. Out of the two-parent families, 36 fathers (58%) had jobs. In addition, almost half of this sample lived below the minimum standard income, and the rest were just above minimum.

Video observation procedure

The data collector was trained and supervised via distant phone-call training by the first author (who is Yemeni). Based on four pilot visits, she commented on and edited the questionnaire and the observational tasks and procedure according to the particular cultural context. Mothers and children were videotaped during a 15-min episode of a daily activity that they usually do together. Mothers covered their bodies with a long black robe called "Belto", their hair with a hijab that is called "Magramah", and a veil that covered their faces. During the video observations three mothers wore only the robe and the hijab but left their faces uncovered. Due to the high illiteracy rate, the questionnaire was carried out in an interview format. The whole home visit took around 2 hours. All participating mothers and their husbands (in the case of two-parent families) signed informed consent forms for their own (mother's) and/or 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 with a small gift of the value of 5 euros. However, in very deprived families, the NGO found it more appropriate to buy food items worth 5 euros as a gift.

Video coding

Maternal sensitivity was coded using the Ainsworth sensitivity scale (1–9), and scores were given for warmth (0–4), physical contact (0–2), verbal expression (0–2), and camera awareness (looking at camera, talking about being filmed, expressing insecurity about being filmed, each 0–2). See the Introduction to this special issue for details on these scales. It is important to note that smiling could not be established easily for these veiled mothers, although it was sometimes inferred from the mothers' eyes or from a movement in the veil around the mouth area. But mostly, warmth was identified from other behavioral elements, such as stroking the child or using terms of endearment. Further, based on the first viewings of the videos, it was decided to add one more observation scale that assesses to what extent mothers chose chores as the main activity during the free interaction. Chores included household tasks such as washing, cleaning, tidying, sweeping, folding, etc. This scale was added as a number of mothers decided to ask their children to do chores as the main activity for their interaction with their children. This

measurement was coded on 3-point scale: 0 = no chores (or only minor brief ones), 1 = some chores (but not as main activity), 2 = many chores (more than half of the video).

The first author (from Yemen) was trained by the last author, an expert coder of the Ainsworth scales and the other scales. To determine inter-coder reliability, 15 videos were randomly selected and then coded by the first and last author, revealing intercoder reliabilities (intraclass correlations, absolute agreement, single rater) of >.70 for all scales. The first author then proceeded to code all the scales for the rest of the sample.

Self-report measures

Social support was measured using a self-report questionnaire focusing on social support mothers receive from family and non-family members. The questionnaire contains nine items exploring the emotional and materialistic support received. Each of the questions is answered on a 3-point scale, where the value 1 is defined as "not at all", 2 as "sometimes", and 3 as "always". Maternal education was scored on a 5-point scale. Maternal education was divided into "0 = no education", "1 = primary school", "2 = secondary school", "4 = high school", and "5 = college degree".

Results

Descriptive statistics for all variables are displayed in Table 1. The mean score on maternal sensitivity in this sample was M = 4.34 (SD = 2.54), which is somewhat below the scale midpoint of 5 on the 9-point Ainsworth scale. On average, mothers in this sample were somewhat more insensitive than sensitive. The distribution of sensitivity scores is presented in Figure 1. Although more than half of the mothers (58%) were indeed (mostly) insensitive to their children's signals, still 15% of the mothers were very sensitive. The mothers showed high levels of physical contact with their children, but very low verbal expression, and also rather low levels of warmth. Maternal sensitivity was not significantly related to child age (p = .14). Sensitivity was expressed in this sample by talking with the child, following his/her signals of what to do/play, supporting children when they would cry either by picking them up, hugging them, patting their heads, kissing them and saying comforting words to help them calm down. Sensitive mothers checked with their children what they would like to do, played along with them, complimented them for doing a good job, distracted them when needed, and changed whatever activity they were doing according to their children's

Table 1. Descriptive statistics.

Variable (potential score range)	M	SD
Maternal sensitivity (1–9)	4.24	2.55
Looking at the camera (0–2)	1.74	0.63
Expressing insecurity (0–2)	0.53	0.72
Talking about being filmed (0–2)	0.39	0.61
Maternal interaction focused on chores (0–2)	0.73	0.79
Maternal physical contact with child (0–2)	1.32	0.83
Maternal verbal contact with child (0–2)	0.74	0.70
Maternal warmth (0–4)	1.84	1.35
Mother focused on child doing chores (0–2)	0.73	0.80
Maternal education (1–5)	2.05	1.34
Maternal perceived social support (4–16)	8.39	2.01

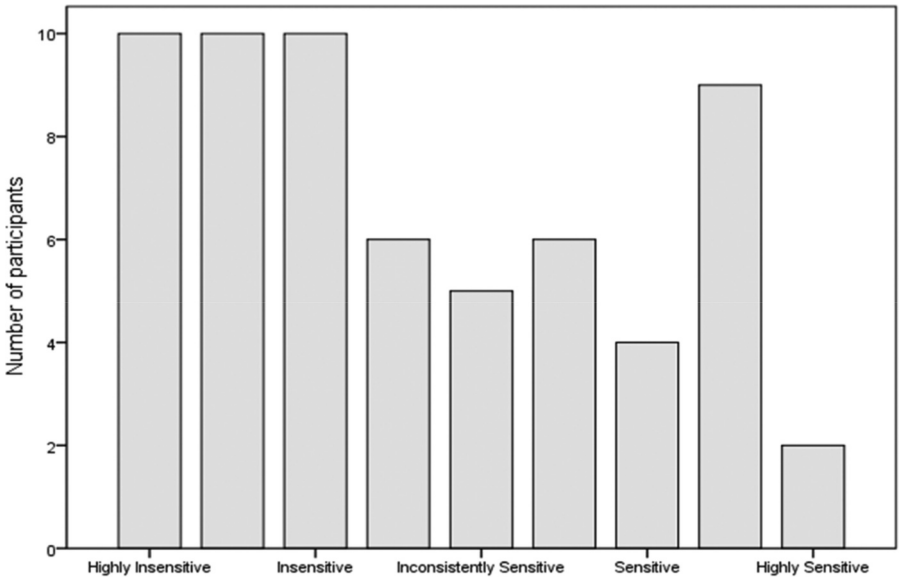

Figure 1. Distribution of maternal sensitivity scores.

signals. For example, one mother was playing with a ball with her child when she noticed that her daughter was distracted and asked her if she was hungry as it was lunch time. When her child confirmed, she immediately asked one of her family members to bring food to the filming area.

Maternal insensitivity was seen when mothers followed their own wishes rather than responding to their children's signals. Insensitive mothers asked their children to do things they did not seem interested in doing; e.g., folding clothes, cooking, cleaning the house. In their interaction, some mothers did not give their children a chance to express what they would like to do, or even prevented them from doing what they wanted to do. They either kept talking throughout the video, or ordering the child around. By doing so, many signals from the children were missed, and some children ended up either doing what they were asked to do or moped in silence. Other mothers with low sensitivity scores used force to have their children comply with their demands, for example, when a mother used physical force to bring her child to sit down to comb her hair. She pulled her, held her hands tightly and then combed her hair with force. Some children were threatened or mocked in order to get them to do something according to the mother's wishes. For example, one mother was making bread with her child when a piece of dough fell accidently from his hands and his mum said "you will eat that piece of bread which is full of stones, OK?".

Regarding camera awareness, looking at the camera happened frequently (more than 90% of the mothers looked at the camera, and many multiple times), 40% expressed insecurity about how well they were doing and 32% talked about being filmed to their children or asked their children to perform for the camera (e.g., singing, dancing, etc.). Even though we did not measure child behavior, anecdotally it was notable that some children were amazed, amused, or entertained by the presence of a video camera at home, some stared or whispered to their mothers, while a small number of children seemed afraid, and froze in front of the camera.

Mothers were asked to do what they would normally do with their children. Some mothers created an interaction with their children where they chose to play, cook, comb their children's hair, do homework, watch and encourage their children play with other present children, and talk with their children about topics of interest to their children. On the other hand, for some mothers the task of choosing an activity with their children was a challenge as their children usually play outside the home during the day. To avoid the situation of no interaction, the research assistant suggested some interaction activities based on advice from some mothers and community facilitators, including chores like folding clothes, cooking, or playing. This was helpful to some mothers who decided on one suggested activity and performed it as they would do on a daily basis. However, some mothers took those examples as literal instructions even though the example would be something they usually might not do with their children. This was reflected in the awkwardness of the situation during the activity for those mothers and their child alike where activities clearly did not approximate an actual everyday interaction; for example, asking children to do things for the purpose of being filmed like in some cases asking children to do multiple chores non-stop during the 15 min. observation. Twenty-one percent of the mothers asked their children to perform chores for more than half of the video while 31% of the mothers suggested some chores but the chores were not the main activity in the video (leading to an average score of 0.72 on the 0-2-point scale, see Table 1). The time spent on chores was positively related to child age, $r = .44$, $p < .01$, but not to the number of (younger) siblings in the family.

Finally, there were many people present besides the mother and the target child. The number of people present at the location of the video observation apart from the mother and the target child was high ($M = 6.49$, $SD = 3.43$). People present were not only family members (i.e., other children of the mother, her husband, relatives) but also curious neighbors and acquaintances. People present were allowed to stay in the observation location but not in the scene in front of the camera. This was in line with the wishes of many female relatives and neighbors who did not want to appear in the video. This, however, created some awkwardness for some mothers. In some of the videos, some of the children and adults present gave instruction either to the child or the mother on how they should behave in front of the camera. However, the number of people in the videos was not related to any of the observed variables except for verbal expression to the child, $r(61) = .28$, $p < .05$.

Regarding relations between sensitivity and other maternal behaviors and characteristics (Table 2), a positive correlation was found with maternal warmth, $r(60) = .65$, $p < .001$. There were no significant correlations with involvement, physical and verbal interactions ($-00. < r < .18$, $ps > .17$). Moreover, the more mothers focused on chores, the less sensitive mothers were, $r(60) = -.41$, $p < .001$. Interestingly, none of the camera-related behaviors (looking at the camera, expressing insecurity, talking about being filmed) were significantly correlated with sensitivity ($ps > .17$). Maternal sensitivity was related to higher maternal education $r(60) = .41$, $p < .001$, and higher experienced social support, $r(60) = .35$, $p < .001$. We further explored if maternal sensitivity was related to child birth order and child age but these associations were not significant (child birth order $p = .14$) (child age $p = .11$).

Table 2. Correlations between sensitivity and other variables.

		1	2	3	4	5	6	7	8	9	10
1	Maternal sensitivity	–									
2	Looking at the camera	−.18	–								
3	Expressing insecurity	−.17	−.16	–							
4	Talking about being filmed	−.18	.05	.08	–						
5	Maternal interaction focused on chores	−.41**	.09	.17	.05	–					
6	Maternal physical contact with child	.14	.26*	−.18	.01	−.36**	–				
7	Maternal verbal contact with child	−.00	−.18	−.05	.24	.05	.23	–			
8	Maternal warmth	.65**	−.13	−.08	−.04	−.38**	.33**	.34**	–		
9	Maternal education	.41**	−.12	−.04	−.06	−.33**	.09	−.07	.30*	.12	
10	Maternal social support	.35**	.02	−.13	−.01	−.13	.18	.04	.13	−.01	–

*P <.05. ** P <.01

An additional multiple linear regression analysis was performed to predict maternal sensitivity by maternal education and social support. Maternal education and social support both explained a significant proportion of variance in maternal sensitivity, $R^2 = .23$, $F(2,59) = 8.60$, $p < .001$.

Discussion

The obtained scores of maternal sensitivity showed significant variation, appeared independent of some of the variables that might be influenced by the video procedure, and showed meaningful relations with other variables. The study results showed that 58% of mothers showed predominantly insensitive behavior. This is in line with the literature on parenting styles in traditional countries such as Yemen tending to be more authoritarian (Dwairy et al., 2006). However, even though the majority of the mothers were insensitive, there were still individual differences in sensitivity where 34% mothers were predominantly sensitive to their children. A significant proportion of this variation within the sample (23%) could be explained by variations in educational level and social support. This confirms findings in previous studies (Mertesacker et al., 2004; Mesman et al., 2012), and suggests that the sensitivity observations tapped into meaningful variations in parenting patterns in this sample. This is further corroborated by the non-significant correlations between sensitivity and camera-related behaviors, showing that camera shyness did not unduly affect sensitivity scores.

The high percentage of insensitive and intrusive mothers in this study might have to do with the artificial nature of the observation setting, and the very low educational level of the mothers who live in slum areas. First, in poor communities, children often play outside (Kimbro et al., 2011) and this could be related to the notion that many mothers do not spend much time exclusively with their children or play together with them due to maternal time spent on housework activities (Brown et al., 2001) .Children do come in for lunch, and during the evening and nighttime. Being in the home together during the day without a clear purpose might have been too artificial and therefore produce more awkward and less sensitive interactions. As suggested by Garcia Coll and Meyer (1993), both unfamiliarity and embarrassment with an unstructured situation which has no relevance to the mother's perception of the maternal role can hamper maternal sensitive behavior in observation situations. Another explanation for the low sensitivity levels may be due to the type of the task some mothers chose to do; some mothers chose tasks that are less likely to elicit

sensitive parenting. For example, cooking was a common activity, and could be more likely to elicit commands than sensitive responses. However, which specific activity would be more effective in eliciting sensitive behaviors is very culture-specific. For example, bathing was found to be a caregiving task that appeared to be a good setting for observing maternal sensitivity in the Dogon in Mali (McMahan True et al., 2001), whereas this was not the case in observations of the Gusii in Kenya where bathing was performed in a rather instrumental impersonal way (Mesman, Basweti, & Misati, this special issue). Longer naturalistic observations would allow for a more detailed analysis of situational and task influences on sensitive maternal behaviour in the Yemeni context.

Second, many mothers had trouble understanding the instruction of "doing what you normally do with your child", which may be due in part to the issue just described but also to the fact that more than half of the mothers (53%) had no education which made the task instructions difficult to comprehend. Many mothers asked their children to do mainly chores in front of the camera or interacted very little with their children while just looking at the camera. In future studies in similar contexts, it might be advisable to change the observation time to the evening, and to just film from eating until sleeping time without any further instructions or when feeding them during lunch time. This way, more naturalistic interactions are likely to be captured, and by filming for a longer period than only 15 minutes, mothers may also become more used to the camera and lose some of their camera awareness. For the same reason, multiple home visits could be helpful. This might also reduce the tendency to want children to "perform" in front of the camera to show the guest (i.e., the researcher) that they are good obedient children which in Arabic culture is a way to bolster one's reputation (Kotnik, 2005).

Alternatively, one could hypothesize that the low sensitivity levels are due to the fact that mothers just do not spend enough time with the children to be sensitive to their needs. However, the results of studies that have examined sensitivity levels in relation to time spent with children (often defined in terms of maternal working hours outside the home) have been highly inconsistent, reporting no effects, positive effects or negative effects, but never particularly large effects (e.g., Bornstein et al., 2007; Buehler et al., 2014; Chang, 2013). One more explanation for the low sensitivity in mothers might be drawn from the cultural context where a focus on adaptation to the harsh circumstances could have shaped parenting in a less sensitive direction (Simpson & Belsky, 2008). However, there were significant individual differences in sensitivity that are difficult to explain from this perspective because all families lived in the same slum area. On a family level though, it could be argued that the reason that mothers high in social support and with higher educational levels are more likely to show adequate to high sensitivity, can reflect a less deprived context, even within a harsh wider living environment. More insight into the parenting goals of these mothers could be helpful in that respect.

To more fully understand the low average sensitivity levels as well as individual differences in sensitivity within extremely deprived circumstances, future studies should consider (1) longer filming without instructions; (2) including a measure of time spent with the child; (3) including a culturally appropriate measure of parenting goals that is also suitable for illiterate parents. Finally, it would be better to have independent coders for the different observational constructs. The fact that all observation variables were coded by the same person in this study means including a measure of that their interrelations should be interpreted with caution.

To conclude, this study showed that video observation is feasible in a veiled context, and yields meaningful information on individual differences in maternal sensitivity. Studying the impact of different video observation protocols on children's and mothers' behaviors in future research, as well as mothers' religious and cultural beliefs regarding parenting in relation to observed parenting would be useful to gain more insight into the contextual factors relevant to observing parenting in traditional Islamic communities in deprived socioeconomic contexts.

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Disclosure statement

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