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Assessing The Reliability and Validity of the Child Abuse Potential Inventory in Arabic Language among Pregnant Women in Oman

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Declaration: I am aware of the University's regulations governing plagiarism and I declare that this document is all my work except where I have otherwise stated.

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ABSTRACT

Background: The Child Abuse Potential Inventory (CAPI) is a screening tool, for assessing a parent's potential towards child physical abuse. It was originally developed in English (Milner, 1986) and later translated to many different languages (Milner and Crouch 2012) but never in Arabic. This thesis aims at producing an Arabic version of the CAPI and assessing its psychometric properties, reliability and validity among a population of pregnant women in Oman.

Methods: Following the development of an Arabic version, the CAPI was administered twice to a population of pregnant women (N= 309) attending Ante Natal Care Clinics in Muscat. A sub-sample of 10 mothers was later interviewed to explore their views and the acceptance of the tool in Oman.

Results: The mean score of the Abuse Scale was 159.6 (range 26-390) which was higher than the American version (mean = 91) but similar to other cross-cultural versions. Internal consistency (Cronbach's $\alpha = 0.91$) and test-retest reliability (Pearson's $r = 0.89$; two-tailed P 0.00) were both high. Regarding construct validity, the six-factor structure of the original version was not replicated; only three factors were obtained. The conservative cut-off score for the upper 5% of the parent sample was 303, which was higher than the cut-off score of 215 in the original US version. From the interviews, mothers reported that the CAPI was easy to complete and appropriate for use in Oman

Conclusions: The Arabic version of the CAPI showed highly satisfactory internal consistency and test-retest reliability. The construct correspondence with the original version was more compromised. This suggests that the Arabic version of the CAPI is a valid and reliable tool to use to assess potential towards child physical abuse within Oman, but with different cut-off scores. These results are in concordance with other cross-cultural versions of the CAPI. Further research is needed to validate an Arabic version of the CAPI in relation to actual parenting outcomes.

Abbreviations

ANC Ante Natal Care

BCAPI Brief Child Abuse Potential Inventory

DFCH Department of Family and Community Health

CAN Child abuse and neglect

CAPI Child Abuse Potential Inventory

CASP Critical Appraisal Skills Program

CPS Child Protection Services

CRC Convention of the Rights of the Child

CDC Centre for Disease Control

GCC Gulf Costal Countries

MoH Ministry of Health (Oman)

MoSD Ministry of Social Development

NSPCC National Society for Prevention of Cruelty to Children

NCSI National Centre for Statistics and Information- Oman

NWCCP National Work plan for Care of Children and Women

PHC Primary Health Care

PhD Doctorate of Philosophy

PNC Post Natal Care

PSQ Parents Screening Questionnaire

**UNICEF United Nations International Children's Emergency
Fund**

WBC Well Baby Care

WHO World Health Organization

Chapter One

Introduction and background

1.1 Introduction

Child abuse is the "disease" of both the child and his or her care giver. The abusive caregiver is characterized by his abusive behaviour which is caused by a number of factors. In most cases it occurs as a reaction to stress, previous history of abuse, poverty and the low level of education of parents (Bailhache et al., 2013). The Child Abuse Potential Inventory (CAPI) is a well-validated screening tool for assessing potential for child physical abuse, and is implemented in many countries and in different languages. However, the CAPI has not been translated into the Arabic Language, or researched within an Arabic culture. Using mixed-methods, this research aimed to produce an Arabic version of the CAPI and assess its validity, reliability, acceptability and relevance to Oman. A translation/ adaptation process was carried out as a first step to ensure its suitability to the Omani context, following which it was administered to a population of pregnant women attending the Ante Natal Clinic (ANC) at Primary Health Care (PHC) centres. This was followed by interviews with a sub-sample of the mothers and key professionals including policy makers, front line physicians, nurses and social workers to understand their views about the CAPI and explore the possibility of using it in a Primary Health Care setting. Findings from each arm of the study were analyzed separately, then together, in order to draw conclusions on the appropriateness and acceptability of the CAPI as a tool for assessing potential for child physical abuse in an Arabic language and culture.

In the following sections, background information about the concept areas relevant to this thesis is presented. The first section describes Oman as a country, its geographical typography, demography and the recent economic and health transitions. Description of the health system is vital for understanding the logistics of carrying out the research and the economic and health transitions in Oman. It then moves on to describing the rationale underpinning this research and screening for child abuse and neglect.

The next section of the document discusses the CAPI, which is the primary instrument being assessed by this research. Following that, findings from the literature regarding the psychometric properties of the English (U.S.) version are presented.

1.2 Setting the Scene (OMAN)

Oman, also known as the Sultanate of Oman, is an Arab Country in the south-eastern end of the Arab Peninsula. Bordered by the United Arab Emirates to the north-west, Saudi Arabia to the west, Yemen to the south-west and marine borders with Iran and Pakistan. Oman is one of the Six Countries constituting the Gulf Costal Countries, which are Saudi Arabia, United Arab Emirates, Kuwait, Qatar, and Bahrain. The dominant language in Oman is Arabic and the religion is Islam (Wikipedia, 2015).

Figure 1. Map of Oman



(Copied from www.infoplease.com/atlas/country/oman.html)

The total area of Oman is 309.5 thousand square kilometres and is composed of topography of plains, wadis (river beds) and mountains. Administratively Oman is divided into 11 governorates with 61 Willayats. These governorates are Muscat, Musandam, Dhofar, North Batinah, South Batinah, North Sharqia, South Sharqia, Al Buraimi, Ad Dhakhliya, Al

Wusta, and Ad Dhahira (Fig: 1). The estimated population of Oman in 2014 was around 4.13 million (2.3 million Omanis) with almost 50% residing in Muscat and the Batinah Regions. According to the National Centre for Statistics and Information (NCSI, 2014), Oman is a young country with 14.3% and 34.3% of its population under 5 and 15 years of age, respectively. Around a quarter of the population are women of childbearing age (15-49 years) making almost half of the total female Omani population (NCSI, 2014). Muscat is the capital of Oman and is the highest populated area with a population reaching almost 1.2 million (NCSI, 2014). Muscat is divided into six Willayats: Muttrah, Muscat, Bausher, Al Amirat, Al Seeb, and Quryyat. There are twenty-three primary health centres in Muscat (MoH, 2013).

The World Bank Classifies Oman as a High Income Country with a Gross Domestic Product \$79.66 Billion in 2013 (World Bank, 2013). The economic growth in Oman is largely due to oil exporting (80%), which was discovered in the last four decades (NCSI, 2014). Such economic growth has had a positive influence on its health indicators (Hill et al., 2000). Infant and under 5 mortality in Oman have declined to 9.8 and 11.8 (per 1000 live birth) in 2013 compared to 118 and 181 in 1970, respectively (MoH, 2013). In 2001, the WHO ranked Oman as “number 1” for its “spectacular performance” in reducing infant mortality in the past three decades (Dhawi et al., 2007).

The health system in Oman is government funded with more than 80% of services provided by the government. It is comprised of three levels of care: primary, secondary and tertiary (Dhawi et al., 2007). Patients are allocated to these services based on their catchment area. All patients are requested to register and follow up at their health centres, and referrals to higher levels of care are carried out as needed.

Maternal and Child Health Services include Ante-natal Care (ANC), Post-natal Care, Birth Spacing, Menopause and Infertility services. Child Health services are provided through the Well-Baby Clinic (WBC), Protein Energy Malnutrition, School Health, and the Integrated Management of Childhood

Illnesses. Most services at primary care level are provided within the health centre itself, home care services are limited to vaccination programmes in remote areas and elderly care due to a lack of community nurses. Health care services in Oman are provided free of charge to all Omani citizens (MoH, 2013).

Efforts related to child protection in Oman began to formalize following the 2006 observatory recommendation report produced by the International Committee of the Convention of the Rights of the Child (CRC) on its forty-third session (UN-CRC, 2006). A National Committee headed by the Ministry of Social Development was established to oversee the implementation of the CRC locally. The national committee included representation of relevant stakeholders including the Ministry of Social Development, Ministry of Education, Ministry of Health, Ministry of Legal Affairs, Ministry of Justice, Ministry of Labor, the Royal Oman Police, and Non-Governmental Organizations. These ministries work collectively and individually to ensure the fulfilment of children's rights (UNICEF, 2009). Their work focused primarily on fulfilling a range of rights in relation to children, including their right to protection (Gerbaka, 2010).

In 2006 the Ministry of Health, Department of Family and Community Health (DFCH) started working on establishing a reporting system of cases of child abuse and neglect reaching health facilities. The system was piloted from 2007-2009 following national training of health care providers on the recognition and reporting of child abuse. In 2010, the system was officially initiated but only for providing a database on child abuse in order to inform policy and study the existence and nature of child abuse in Oman. This eventually led to the formation of multi-disciplinary taskforce for the follow up and support for families where child abuse has been identified, these teams are headed by the Ministry of Social Development. A hotline for reporting of cases and other family related issues, operable only during working hours, was also established in 2010 (UNICEF, 2009).

Originating out of the national committee for the CRC, a subcommittee was established in 2008 to produce a draft of the Omani Child's Law with

articles specific to child abuse. This law was endorsed by His Majesty the Sultan Qaboos in May 2014. The law has articles specific to mandatory reporting of child abuse and punitive punishment of abusers (MoSD, 2014).

Although there are now a range of policies and practices aimed at addressing child abuse in Oman, these are disparate and focus on responding to identified cases of CAN. Very little is being done in terms of prevention, in addition to that not much is known to what degree they are implemented, and what laws are actually enforced.

1.3 Screening for Child Abuse and Neglect

The appropriateness of adopting a screening policy for any health condition depends on estimating the burden of the disease, availability of screening tools and treatment, acceptability of the screening to the population, and the natural history of the condition (Bailhache et al., 2013, Hodge, 2004, Wilson and Junger, 1986). The success of an intervention depends on its ability for early detection and intervention (Peters and Barlow, 2003). The application of screening policies in the area of mental health and well-being is fairly limited, particularly in relation to behaviours such as parenting, which may not fulfill the standard criteria for screening. Screening for child abuse and neglect remains a contentious topic; while some researchers support the idea, others have concluded that it is not supported by the evidence (Taylor et al., 2007, Woodman et al., 2008, Lowers et al., 2009). Even among those supporting a screening strategy, a strong debate revolves around whether it should be based on clinical judgment and professional experience or the use of standardized tools.

The American Academy of Pediatrics Committee on Psychosocial Aspects of Child and Family Health (1998) encouraged health care providers in outpatient departments to screen for the use of corporal punishment and assist parents with alternative methods of discipline (AAP, 1998). A study that was carried out in a university affiliated community clinic assessing the

prevalence of corporal punishment in a primary health care setting reported 7% of infants and 32% of pre-school children were subjected to physical punishment using Parents Screening Questionnaire (PSQ) and 14% of infants and 20% of older children using the Parent- Child Conflict Tactic Scales (CTSPC) (Figelman et al, 2009).

An alternative to screening using standardized tools is screening using home visiting nurses, which allows a direct assessment of the conditions a child lives in. However, this system is not available in all countries and may not be feasible to implement. On the other hand, several standardized screening tools currently exist with evidence on their effectiveness (e.g. Diderich et al., 2014; Louwers et al., 2009); and universal screening using standardized tools is also less stigmatizing to families (Peters and Barlow, 2003).

A number of tools exist for assessing parenting competency and screening for child maltreatment. These include the Parenting Stress Index (PSI: Abidin 1983), the Michigan Screening Profile of Parenting Scale (MSPP: Helfer et al. 1978), The Conflicts Tactics Scale (CT: Straus 1979), the Child Abuse Potential Inventory (CAP: Milner 1986), and a short form of the Child Abuse Potential Inventory (Ondersma et al. 2005). However, the majority of these measures have a relatively narrow focus (i.e., on a particular risk area) or provide very broad profiles that may not screen sensitively enough for specific forms of child maltreatment, such as physical child abuse (Walker and Davis, 2012). Many of them have also have not been validated cross-culturally.

Two systematic reviews concluded that using standardized tools for screening for child abuse at the A&E departments was not supported by evidence, and that the most accurate method for detecting child abuse is by a thorough clinical assessment and referral to social services for further evaluation (Woodman, 2008). In addition, most screening tools are low on predictive value (Peters and Barlow, 2003), which carries the risk of over-burdening a system. The study by Figelman et al (2009) reported that using standardized tools such as the PSQ and CTSPC may be low on sensitivity

but are good in terms of specificity, and they argue that because no case of child abuse should be missed, it's better to err on the side of inclusion.

Another debate around the use of standardized tools relates to the ethics behind using them; explanations given to parents prior to testing them, and stigmatizing certain parents as being potential abusers (Taylor, 2007). Whilst all these concerns are genuine, there are also advantages to having a systematic methodology for assessing those at greater risk to provide early intervention, as the consequences of child abuse are long lasting and affect individuals, families and societies. Child abuse has been found to affect all aspects of the individual's mental and physical health both in the short and long term in addition to its high economic burden (Gilbert et al., 2009; Peters & Barlow, 2003; al Saadoon et al., 2011; Barlow et al., 2006; Guterman, 1997).

1.4 The Child Abuse Potential Inventory (CAPI)

The CAPI is a self-administered screening tool for assessing parents' potential for child physical abuse that comprises 160 forced-choice items (Appendix 1) with a readability level of third grade. It contains a total of ten scales, the main one being the Child Physical Abuse scale, composed of 77 items. The abuse scale is further sub-divided into six factor scales which are: Distress; Rigidity; Unhappiness; Problems with Child and Self; Problems with Family; and Problems from Others. The abuse scale has two cut-off scores: 215, indicating that the respondent has characteristics similar to those known child abusers; and a 166 cut-off score, which is a "signal detection" to indicate increased potential for abuse within this higher-risk population. None of the scales are diagnostic of actual abuse (Milner, 1986).

In addition to the abuse scales, the CAPI contains three validity scales: the Lie Scale; the Random Response Scale; and the Inconsistency Scale. Scores from the validity scales do not influence the abuse scale; they are, however, used in different combinations to form indices of response bias (Faking-good, Faking-bad, and Random Response index). These indexes are assessed for the purpose of acceptance or rejection of respondent's results to the Abuse scale, as in table (1). If any of the validity indexes are elevated,

the abuse score is not considered to be a true representation of the respondent's actual potential (Milner, 1986).

Table 1. Validity Scales and Cut-off Scores

Validity scale	Cut off scale scores
Lie Scale	7
Random Response	6
Inconsistency Scale	6
Faking – good index	$L \geq 7$ and $RR \leq 5$
Faking bad index	$RR \geq 6$ AND $IC \leq 5$
Random response index	$RR \geq 6$ AND $IC \geq 6$

CAPI manual, 2nd edition pg: 11 (Milner, 1986)

The CAPI was originally developed to be used as a screening tool to detect a parent's potential to physically abuse their child. It has, however, subsequently been used in a variety of other clinical settings and in the general population (Barlow et al., 2013; Pager et al., 2014; Cerny & Inouye, 2010; Mc Nary & Black, 2003; Voorthuis et al., 2014; Beitchman, et al., 1992; Jones et al., 2010). Many research studies have concluded that the CAPI is a useful tool for screening for potential of abuse in populations suspected of abuse and general population (Ayoub & Milner, 1983; Walker & Davis, 2010; Milner et al., 2012; Caldwell et al., 1988; Bailhache et al., 2013; Miller et al., 1991; Zeleco et al., 2001; Ornduff, 2002; Schaeffer et al., 2005). UNICEF has also recommended the CAPI for use as a research tool for assessing the effectiveness of early childhood home visiting programmes (UNICEF, 2013).

The FDA guidelines in 2007 recommend a series of steps for the development, modification and validation of an instrument. They emphasize the importance of documentation of the process and basis of modifications that were carried out (Patrick et al., 2007). Such documentation is available in the second edition manual of the CAPI, where Milner reported that the development of the CAPI followed the review of more than 700 published papers and books on child abuse and neglect. The review aimed at identifying personality traits and characteristics of individuals who had a

history of abuse. These characteristics were identified and grouped together to form “areas of concern” and to formulate the item syntax. A process of discussion and review was then undertaken with professionals in the field, and items were adjusted accordingly.

The authors carried out an initial validation study with a small group of abusers (n=19) and non-abusers (n=19) to identify which items would correctly discriminate between them. Based on that, the 160 item CAPI was constructed and tested among a larger group of participants (n=130) that were identified as abusers and not. This second study indicated that 77 of the items significantly discriminated between the two groups, 96% correctly classified participants as abusive or non-abusive ($p < .05$). Based on these findings, the scoring procedure was developed using Beta regression.

This was followed by a third cross-validation study among an even larger population of 122 abusers and 110 comparison subjects. In this third study the CAPI correctly classified 88.2% of non-abusers and 82.9% of abusers. A number of research studies followed this, for the validation of the other scales and indices employed in the CAPI (Milner, 1986). There are today over 1200 publications on the CAPI assessing its reliability and validity in a number of clinical and non-clinical trials.

1.5 Psychometric Properties of the English (U.S.) CAPI

The psychometric properties of the CAPI are reported in the manual published by Milner (1986) and other reports (Milner, 1986; Milner, 1989; Milner, 1991). A scoping review was carried out as part of this PhD and identified a review by Sacchi and Simonelli (2014) that has looked at the literature published between 1986 to 2014. The review included about 100 papers and concluded that 45 papers were good enough to verify the ability of the CAPI to discriminate between high and low risk groups using the cut-off scores suggested by Milner. Fifty-six papers can be used to distinguish between abusive and non-abusive parents and provide risk factors for parents with high and low scores (Sacchi & Simonelli, 2014). In the following section results from the American CAPI developed by Milner will

be presented, as they are considered the gold standard comparator to other translated versions of the CAPI.

Reliability is defined as the ability of a measure to consistently measure an attribute. Although there are several tests to measure reliability, internal consistency and temporal stability are the most important ones (De Von et al., 2007). Internal consistency coefficients for the control group ranged from .92 to .98, and .95 to .98 for the Abuse Scale (Milner, 1986).

Temporal stability or “test re-test” refers to the ability of a psychometric instrument to produce consistent results over a “period of time”. This “period of time” should not be so long that the respondents’ attitudes are changed, nor so short that the answers are remembered, and two weeks to 1 month is accepted as a good time interval for retesting (De Von et al., 2007). Milner in his manual (1986) reports values of retest scores at four intervals: values at one day, one week, one month, and three months were .91, .90, .83 and .75 respectively (Milner, 1986).

Construct validity provides a description of the characteristics associated with individuals scoring high on the CAPI abuse scores. In a review carried out by Milner and Chilamakruti (1991) to assess characteristics of "perpetrators" documented in the literature, four main factors were reported: social factors, which include socio-demographic characteristics and previous history of abuse; biological factors including both mental and physical health; cognitive and affective factors including self-esteem, locus of control, depression and other factors; and, finally, behavioural factors, which include substance misuse, parent and child interaction, social isolation and punitive strategies (Milner, 1990, Milner and Chilamakruti, 1991).

The results of an initial study carried out by Milner and Wimberly (1980) showed classification rates between abusers and non-abusers to be 90%. Subsequently, when a more diverse population was included, correct classification was found to be between 80 to 90%, using the 215-cut-off score. This result slightly improved when the invalid protocols were removed, as the cut-off score correctly classified 81.4% of the abusers group

and 99% of the comparison group, with an overall rate of 90.2% (Milner, 1990; Sacchi & Simonelli, 2014).

Future predictive validity was assessed by Milner et al. (1984) with two hundred parents enrolled in a parenting programme who were followed up to determine subsequent maltreatment over the next two years. Of the 200 parents, forty two cases were reported and confirmed for abuse (11 reported for abuse, 15 for neglect and 16 for failure to thrive). The authors reported a significant relationship between abuse scores and confirmed child physical abuse, a modest relationship with neglect, and no relationship with failure to thrive (Milner et al., 1986).

Similarly a review (Chaffin and Valle ,2002) assessing pre- and post-intervention scores of actual abuse happening in the future (within 2 years) included 459 participants engaged in 27 community-based interventions. Using a Cox proportional hazards survival analysis, the authors reported a significant association between the CAPI pre-intervention score as “a single point in time measure” and future predictive validity. However, assessment of the change in scores pre- and post-intervention and future abuse did not produce significant results. The authors attributed this to the possibility of faking good responses following the intervention, or the proximity in time between the second assessment and the actual abuse (Chaffin and Valle, 2002). The review indicated that only 10% of the reported maltreatment cases were for physical abuse, and the rest were for neglect (61%), physical abuse and neglect (21%) and sexual abuse (8%), but they did not indicate if events of actual abuse were limited to physical abuse or included all forms of maltreatment reported.

A brief form of the CAPI (B/CAPI) was developed and validated by Ondersama and colleagues (2005), which contains a total of 33 items of which 24 comprise the Abuse Scale. Internal consistency for the Brief CAPI was found to be .89, which is close to the full CAPI. The authors have concluded that the Brief CAPI can be used as an alternative and shorter screening tool to the full CAPI. The Brief CAPI is also more suitable for assessing potential for child abuse in individuals who do not yet have a child

because it contains fewer “child-related items” and is easier to score (Ondersama et al., 2005). Furthermore, its reliability has been demonstrated by Walker and Davis (2012), who assessed the reliability of the Brief CAPI in a cross-cultural sample of 324 parents recruited from various schools in the UK. The study reported an internal consistency level of .81 (Walker and Davis, 2012).

The study sample did not include parents with a known history of previous abuse; however, 92.3 % of the parents scored below the discriminatory cut-off score of 12, which was found to be comparable to Milner’s classification rates of 85.4% and 96% of the Full CAPI. The rest of the 7.7% with higher scores were not followed up to determine if abuse did take place in the future. The study had concluded that the Brief CAPI is a useful tool for use with cross-cultural populations in the UK, but more research is needed in terms of its use in other countries (Walker and Davis, 2012).

The authors also carried out Exploratory Factor Analysis, which resulted in a similar six-factor scale solution as in the American BCAP found by Ondersama (2005). However, different items loaded differently on different factor scales in the UK. For example, while the US Happiness factor was associated with behaviour of children, it was linked to a general sense of life being good and person not being in need in the UK (Walker and Davis, 2012).

1.6 Limitations of the CAPI

The CAPI has been documented to detect twice as many false negatives as false positives (Milner, 1986 & Orme et al., 2000). This suggests that the CAPI would more likely fail to recognize “abusive parents” than to misclassify “non-abusive parents”.

A review was carried out by Peters and Barlow (2003), in which eight instruments were assessed for their ability to predict child maltreatment during the Antenatal and Postnatal period. Positive predictive value was assessed for the CAPI and was found to be 28% only and Negative Predictive Value was 85.1% (Peters and Barlow, 2013). This review has

drawn its results from the (1984) study by Milner and colleagues discussed above (Milner et al., 1984).

However, the CAPI has a few major limitations including that it is only intended for physical abuse, that some of its predicting factors depend on past experiences that cannot be modified and that most translated versions of it produce high false positives.

1.7 Study Justification

Child maltreatment is a reality in Oman as elsewhere, and has long-lasting consequences at both individual and societal levels (UNICEF, 2009). Although the exact prevalence of the problem has not yet been determined due to the absence of a national system for collecting information, one hundred cases were reported through a hot line in six months (Times of Oman, 2017). In addition to that 660 cases were reported from the Ministry of Health notification system from 2007 to 2013, of which almost 47% were physically abused (MOH Unpublished report, 2014). These cases are collected through health facilities only, and as such, they tend to over-represent the severity of cases and under-estimate the problem in the community (Al Mahroos, 2007).

Screening for child abuse is an important method of identifying such cases early, but this requires appropriately validated screening tools. Such measures of assessing the potential for child abuse have been found in the literature to be associated with a number of outcomes related to actual child abuse. Although the CAPI was originally developed in 1986, it is one of the few available well-validated tools for measuring child abuse potential, and there is now an extensive literature on this widely-used tool regarding its reliability and validity in assessing potential for child physical abuse and a range of outcomes related to maternal and child health factors (Guttentag, et al., 2014; Peters & Barlow, 2013; Dukewich et al., 1996; Milner, J., 1991; Cadzow & Armstrong, 1998; De Paul & Domench, 2000; Orme et al., 2000; Fraser et al., 2000; Cerny & Inouye, 2001; Chan et al., 2012, Chudal et al., 2015, Combs- Orme et al., 2000).

The CAPI has been widely translated for use across different languages and cultures (e.g. Croatian (Pecnik & Ajdukovic, 1995), Greek (Diareme et al., 1997), Chilean (Haz & Ramirez, 1998), Finish (Haapasalo & Aaltonen, 1999) Chinese (Chan et al., 2006), Belgium (Grietens et al., 2007) Japanese (Kawamura et al., 2009) Thai (Sawasdipanich et al., 2011), Turkish (Kutsal et al., 2011), Spanish (Bringiotti, et al., 1998), Argentinian (de Paul et al., 1991) and German (Sprangler et al., 2009), Italian (Miragoli, 2015) and has been found to be reliable (e.g. Internal consistency ranged between .87 to .93 in the general population and .89 to .94 in the abuse group), sensitivity ranged between 83 to 100% and specificity from 85 to 100%. While the CAPI has been extensively researched among different population groups, it has not been translated into the Arabic language or specifically implemented with Arab communities. Although it could be argued that tools developed for Western cultures may not be suitable for another culture (Schmidt & Bullingn, 2003), a number of tools that were adapted from Anglo- American cultures have been found to be reliable in Arab countries, including the Edinburgh Postnatal Depression Scale (EPDS), (Ghubash et al., 1997), Mini Mental State Exam (MMSE) (Wrobel & Farrag, 2008), and the Quality of Life Index (Halabi in 2006).

The research was conducted with women who are pregnant rather than parents of older children because this is a key time to be working in terms of preventing child abuse, and because the use of this tool with parents of older children has already been widely undertaken. Although fathers are important group, and should be screened in the future, the current research focuses on mothers at this initial phase.

An expected outcome from this research is the production of a validated Arabic CAPI, which could then be used in Oman and other Arab speaking communities. This could help to inform developing policies related to child protection and the use of preventive programmes in Oman and other Arab countries.

1.8 Thesis Structure

This thesis presents the findings of a study assessing the reliability and validity of the Child Abuse Potential Inventory in Oman, an Arab Muslim country. The research was carried out as three separate phases. The first phase was aimed at adapting the English CAPI into Arabic language and pilot testing it. The second aimed at assessing the prevalence of Omani pregnant mothers scoring above the cut-off value suggested by Milner and evaluating the stability of scores over a two weeks period. This quantitative study also assessed the reliability and validity of the Arabic CAPI. The third phase of the study involved the use of qualitative methods and aimed at exploring the views of mothers and health care and social sciences professionals involved with child protection of the CAPI and its use at Primary Health Care level.

Chapter one was the introductory chapter and described concept areas related to this research. Chapter two describes a literature review focused on translated versions of the CAPI across different cultures and languages. The third chapter describes the methods used for carrying out this research in Oman. This includes a description of each phase of the research project; local logistics, study governance, ethical clearances for carrying out this research, recruitment process and data management of all three arms of the study. Chapter four presents details of the adaptation process, methods and findings. Chapter five presents results of the longitudinal study in terms of prevalence and stability. Chapter Six reports the findings with regard to the psychometric properties of the Arabic CAPI. Chapter seven reports the results of the qualitative research and Chapter eight provides an overview of the findings, and examines the implications for future practice and research.

Chapter Two

Literature Review

2.1 Introduction

The previous section provided background information on Oman, local policy and practice regarding child abuse and the CAPI which is the tool of interest for this research. This chapter will discuss the findings from the literature on the psychometric properties of translated versions of the CAPI.

2.2 Search and Inclusion Criteria

To locate studies assessing the psychometric properties of translated versions of the CAPI, a number of key data-bases were searched including Medline, ASSIA, CINAHL, Psychinfo and EMBASE. Other sources including the COCHRANE Library, the ISPCAN library, the NSPCC library and UNICEF were also searched. Additionally, search engines such as Google scholar and the three main child abuse journals were explored: Child Abuse and Neglect; Child Maltreatment; and Child Abuse Review. Reference lists were also reviewed to identify further papers. The author Milner was contacted to locate published and un-published papers on translated versions of the CAPI. Although the search only included full papers published in English Language, results from abstracts of papers published in languages other than English were also included (Table 2).

The search was conducted using a range of the following key search terms; Child Abuse Potential Inventory, CAPI, translation, psychometric properties, validation. Papers were only included if they have assessed translated versions of the CAPI in languages other than English. Papers that tested the English CAPI in a cross-cultural setting were excluded.

Table 2. Search methodology

Search terms	# 1- Child Abuse Potential Inventory or CAPI or # CAP Inventory #2- translation or translated versions #3- psychometric properties #4- validation
Data bases Searched	Medline, ASSIA, CINAHL, Psychinfo and EMBASE. Other sources including the COCHRANE Library, the ISPCAN library, the NSPCC library and UNICEF
Years searched	1986- 2017
Inclusion Criteria	Studies that translated the CAPI into a different language
Exclusion Criteria	Studies that used the English CAPI among a population

2.3 Included Papers

The literature search yielded papers published from fifteen different countries; 1. Croatia: Pecnik & Ajdukovic, 1995, 2. Greece: Diareme et al., 1997, 3. Chile: Maria Haz & Ramirez, 1998, 4. Finland: Haapasalo & Aaltonen, 1999 & Ellonen et al., 2017, 5. Netherlands: Keuning et al, 2002, 6. Chinese population in Hong Kong: Chan et al., 2006, 7. Belgium: Grietens et al., 2007, 8. Japan: Kawamura et al., 2009, 9. Thailand: Sawasdiapanich et al., 2011, 10. Turkey: Kutsal et al., 2011, 11. Italy: Mirogoli et al., 2015. Four papers were published in foreign languages; two in Spanish by Bringiotti, et al., 1998 on the validation of the CAPI in Argentina and Perez- Albeniz and de Paul, 2004 in Spain, Germany (Sprangler et al., 2009) and one from Brazil (Bergamo et al., 2009) but the abstract was in English. Two reviews were also found addressing the use of CAPI in translated versions - one was a meta-analysis (Milner and Crouch, 2012) and the other was a critical review (Walker and Davies, 2010). As almost all papers (excluding Mirogoli et al., 2017 and Ellonen et al., 2017) identified were included in the systematic review by Milner and Crouch,

2012, a narrative summary will be provided in key areas related to this research.

2.4 Psychometric Properties of Translated Versions of the CAPI

2.4.1 Critical Appraisal of the Systematic Reviews Included (Milner and Crouch, 2012 & Walker and Davis, 2010)

Although this is not a systematic review, the two systematic reviews have been critically appraised using the Critical Appraisal Skills Program (CASP) to evaluate the strength of the reviews and assess the reliability of the results. Items included in the CASP are provided in table 3.

Table 3. Summary of Critical Appraisal using the CASP

CASP Item	Milner and Crouch, 2012	Walker and Davis, 2010
1. Did the Review a clearly focused question	Yes	Yes, but not enough papers were included
2. Did the authors look for the right type of papers	Yes	Can't tell, as two studies were in ethnic groups but it was not clear if the English CAPI was used or a translated version
3. Do you think all the important, relevant studies were included	Yes	No, only 3 papers were published although there are almost 12 papers published before 2010
4. Did the reviews authors do enough to assess the quality of papers included	Can't tell No assessment of the translation process	Can't tell No assessment of the translation process in addition population included parents with history of neglect.
5. If the results were combined, was it reasonable to do	Yes, results were combined for the internal consistency.	No, the review reported a classification rate of 70 to 89%, however 66% of the Croatian abusers group had

so		history of neglect.
6. What are the overall results of the review	Discussed below	Discussed below
7. How precise are the results	Confidence intervals were not provided. Results combined studies using different criteria in terms of weighted/ non weighted items and cut-off score values	Different groups were combined with sampling flaw. Confidence intervals not provided.
8. Can the results be applied to the local population	Results from this research can be compared to finding from cross cultural studies	Results from this research can be compared to findings
9. Were the important outcomes considered	Yes	Yes
10. Are the benefits worth the harms and costs	Not applicable	Not applicable

Both reviews addressed clearly defined questions and both aimed at assessing results of the psychometric properties of translated versions of the CAPI among culturally diverse populations. However, results produced by Walker and Davis (2010) were of limited value to this research as, although 27 studies were included, only three reported outcomes of translated versions of the CAPI (Croatia, Greece and Chile). The review also reported on findings among "ethnic groups" in the US (Herman, 1995 and Blinn-Pike and Mingus, 2000) but no proper description of the included population was provided or whether the papers used an English US CAPI or a translated version. This limited number of papers can be attributed to the fact that the authors searched only two databases (Medline, and PsycINFO). This review also reported a classification rate of 70 to 89% when it combined the results of the Chilean and Croatian population. However, 66% of the Croatian

abuse group were parents with history of neglect, while the CAPI is a tool intended for child physical abuse.

The two reviews (Milner and Crouch, 2012 and Walker and Davies, 2010) did not provide a description and critical appraisal of the adaptation process in the included papers, which is a key point when assessing strength of results produced by translational research (Hambelton et al., 2009). When examining the individual studies that were identified through search of the literature, it was noted that translation processes differed widely across studies in terms of the following criteria; proficiency level of translators, translated the original English into the target language or using an already translated CAPI to another language (Grietens et al., 2007 from Dutch to Flemish), solving discrepancies in translations through expert consensus and carrying out a back translation).

Both reviews have answered clearly outcomes to be measured as outlined below.

2.5 Findings of Existing Systematic Reviews

The review by Milner and Crouch (2012) carried out a meta-analysis to assess the psychometric adequacy of translated versions of the CAPI. The review aimed at: 1) comparing internal consistency for translated versions to the original US-English version; (2) assessing classification rates of translated CAPI's; (3) evaluating the construct validity of the translated versions; and (4) comparing data for translated versions to the English (U.S.) versions. The authors carried out subgroup analyses to examine differences based on population (i.e. general population versus abusive), and meta-analysis was only conducted where there was sufficient homogeneity in terms of population groups and classification methods.

The results for internal consistency found that general population estimates ranged from 0.87 to 0.93 as measured by Cronbach's alpha. The results were comparable to results produced by the English (U.S.) CAPI, and the authors concluded that internal consistency of the abuse scale is adequate and stable across different translations.

The second aim of this review was to assess the correct classification for the translated versions of the CAPI. A meta-analysis was not conducted due to the heterogeneity of the studies in terms of both approaches used for the classification and the participants included. For example, the CAPI is designed to measure child physical abuse, but two of the studies included parents with previous history of child physical abuse and neglect (Tapaculo & Aaltonen, 1999 and Pecnik & Ajdu-kovic) with 66% of parents having a history of neglect in the Croatian study (Pecnik & Ajdu-kovic, 1995). This may reflect a recognized coterminosity between different types of maltreatment generally recognized in the literature. Nevertheless, Milner and Crouch reported classification rates to range from 86.5% to 100% for the general population and 83% to 100% for the maltreating groups.

The third objective for this review was to compare the construct validity of the Abuse Scale of the translated versions to the original English (U.S.) CAPI. The Abuse Scale is made up of six factor scales; Distress, Rigidity, Unhappiness, Problems with Child and Self, Problems with Family, and Problems from Others. The author concluded that across translated studies, factor analytic data indicated relative stability among the prior three factors, and instability with the latter three factors. Differences were also found in the cut-off scales between the (U.S.) and translated versions.

Correct classification rates of the translated CAPI have yielded sensitivity and specificity that were similar to the (U.S.) English CAPI. However, Milner and Crouch indicate that, unlike the (U.S.) English CAPI, translated versions of the CAPI can yield more “false positives” than “false negatives”. This could be due to the existence of different parenting practices across different cultures and differences in the definition of abuse across cultures. This may necessitate assigning different cut-off scores in different populations, which can be produced after carrying out longitudinal studies measuring outcomes in tested populations, or case-control studies with abusive and non- abusive populations.

The review carried out by Walker and Davis (2010) had three main aims, one being to assess the psychometric properties of cross-cultural use of the

CAPI. This focused on assessing the internal consistency, sensitivity and specificity classification rates in papers summarizing cross-cultural validation of the CAPI. This review examined the results of three translated versions of the CAPI: Croatian, Greek and Chilean. They reported internal consistency for the Abuse scale of 0.91 -0.95 and correct classification of the Abuse scale from 78% – 87.9%.

In terms of reliability the study reported that the CAPI has good internal consistency for the Abuse Scale (0.91- 0.95). This however was not replicated for subscales as “Problems with Child”, “Unhappiness”, and the validity indices “The Random Response” and the “Inconsistency Scale”. The authors suggested that these scales maybe measuring different concepts and highlighted the importance of validating these measures cross culturally.

The factorial structure was assessed in two papers (Diareme, and Haz & Ramirez, 1997); one paper adopted a five-factorial structure and the other a six-factor structure. Both studies reported a change in the item loading and construct compared to Milner’s structure.

2.6 Second: Findings from Primary Studies

A total of seventeen papers were identified from the following countries: Taiwan: Huang et al., 1992 (Abstract only), Croatia: Pecnik & Ajdukovic, 1995; Greece: Diareme et al., 1997; Chile: Haz & Ramirez, 1998; Finland: Haapasalo & Aaltonen, 1999 and Ellonen et al., 2017; Netherlands: Keuning et al., 2002, Chinese population in Hong Kong: Chan et al., 2006; Belgium: Grietens et al., 2007; Japan: Kawamura et al., 2009; Thailand: Sawasdipanich et al., 2011; and Turkey: Kutsal et al., 2011, Italy: Miragoli et al., 2015. Four papers were published in foreign languages: two in Spanish by Bringiotti, et al., 1998 on the validation of the CAPI in Argentina, and de Paul et al., 1991 in Spain; Brazil: Bergamo et al., 2009 and one from Germany, abstract in English (Sprangler et al., 2009).

2.6.1 Critical Appraisal of Included Papers

As a first step, critical appraisal was carried out comparing methodologies used with stages recommended in published guidelines on translation processes (Wild et al., 2009, Geinsinger, 1996, Sagheri et al., 2010). This examined the rigor of the translation process, piloting of the CAPI, the population studied, reported outcomes, and assessment of the validity of the scales. The following section discusses the results of the appraisal that was undertaken.

2.6.1.1 Description of the Translation Processes

Proper translation of psychometric tools is a crucial element in cross-cultural translation studies to ensure the validity of the results. Methodological flaws in the translation process can yield erroneous conclusions and results which are difficult to detect (AlSalhi, 2004). All included studies have provided a description of the translation process; however, the rigor of the methods differed across the papers. Three papers (Sawasdipanich et al., 2010, Haapasalo & Aaltonen, 1999 and Kustal, 2011) provided a brief description of the translation process. Kawamura et al., 2009 paper reported that a translation process was referred to in a different article by Kako M. and Imazeki in 1999, which was not available. Translation in the remaining papers was described in detail and carried out by postgraduate level or professional translators. The translation to the Flemish language in the paper by Grietens et al., (2007) was carried out in cooperation with two universities, one in the Netherlands and one from the Flemish part of Belgium. This study has, however, used the Dutch CAPI (Devldere and Stevents 2001, Wglewski, 200), which was produced as part of a master's degree (not available on-line) and translated to Flemish language, after gaining permission from the author. No proper description of the Dutch CAPI was provided, and whether it was used in other research studies other than the original master's degree.

2.6.1.2 Proficiency Level of Translators

Chan et al, 2006, reported that translation was carried out by two independent professional translators and three items were found to produce

differences in meaning (less than 5%), and were solved by expert consensus. To ensure suitability of the translated CAPI into the Chilean context (Haz & Ramirez, 1998) the authors translated two versions of the CAPI; one made in the US for a Latin population and one in Spain. The authors reported that while some of the items remained unchanged, others were modified and one item was removed as it did not apply to the Chilean Context (Not having a telephone number). The Pecnik & Ajdu-kovic (1995) paper reported translating the CAPI by the authors and professional translators. Diareme and colleagues (1997) reported that translation was carried out by two independent bi-lingual doctoral students following the Brislin's (1970) guidelines, and consensus meeting was carried out to resolve ambiguous items (11%) and the Italian paper was independently translated by two bi-lingual professionals and discrepancies were resolved through discussion .

2.6.1.3 Back Translation

Back translation is the process of translating a document that has already been translated into a foreign language back into its original language. However, there is controversy on the role of back translation in ensuring semantic equivalence as different wordings may have different meanings when translated, or there maybe gender variations (Mc Kena & Doward, 2005, AlSalhi, Geisinger, 1994). Five papers reported carrying out back translations (Haapasalo & Aaltonen, 1999 and Kustal, 2011; Grietens et al., 2007; Diareme et al., 1997, Miragoli et al., 2015). However, only the Italian paper (Miragoli et al., 2015) reported that two items were divergent following back translation and consensus was reached through discussion. The remaining papers did not document how changes from the original version were dealt with and whether the purpose of the back translation was to ensure semantic equivalence or literal translation

2.6.1.4 Piloting the Translated Version

Three papers carried out pilot testing of the translated CAPI (Haz and Ramirez, 1998, Chen et al., 2006 and Sawasdipanich et al., 2010). Chan et al., (2006) described that the pilot testing indicated that it took the respondents approximately 30 to 40 minutes, which was more than was

anticipated by Millner (15 to 20 minutes). Haz & Ramirez (1998) reported the need for reading aloud the CAPI to respondents as the pilot indicated that their understanding level was lower than their reading level. Sawasdipanich and colleagues (2010) reported that a pilot was carried out with 20 parents, and that the internal reliability was 0.90 for that group.

2.6.1.5 Study Populations

Descriptions of the included study population are crucial to evaluate whether findings can be compared between control and study groups, and if they can be generalized to other population groups. Validation of the translated CAPI across the current studies was carried out among populations with different characteristics. This included parents with a history of abuse and those without and mothers or fathers with different socio-demographic characteristics. Nine studies (Maria Haz & Ramirez, 1998, Kawamura et al., 2009, Pecnik & Ajdu-kovic, 1995, Kutsal et al., 2011 and Diareme et al., 1997, Keuning et al., 2002, Sawasdipanich et al., 2010, Miragoli et al., 2015, Ellonen et al., 2017) have assessed potential for child abuse among both mothers and fathers, while three studies (Haapasalo & Aaltonen., Grietens et al., 2007 and Chan et al., 2006) included mothers only. Eleven studies (Pecnik & Ajdu-kovic, 1995, Diareme et al., 1997, Haapasalo & Aaltonen., Maria Haz & Ramirez, 1998, Grietens et al., 2007, , Keuning et al., 2002, Chan et al., 2006, Bergamo et al., 2009, Sawasdipanich et al., 2010, Miragoli et al., 2015, Ellonen et al., 2017) provided descriptions of the population in terms of gender, educational level, socioeconomic status and child age and number of children. The two studies by Kawamura et al., 2009 and Kutsal et al., 2011 did not provide specific information.

The CAPI a tool for assessing potential towards child physical abuse had been researched extensively among mothers. This was the case with the main validation studies carried out by Milner (1980), where by the study sample consisted of 12 males and 118 females, and in various cross-cultural validations validation of the CAPI. Although nine studies (Maria Haz & Ramirez, 1998, Kawamura et al., 2009, Pecnik & Ajdu-kovic, 1995, Kutsal

et al., 2011 and Diareme et al., 1997, Keuning et al., 2002, Sawasdipanich et al., 2010, Miragoli et al., 2015, Ellonen et al., 2017) have assessed potential for child abuse among both mothers and fathers, three studies (Haapasalo & Aaltonen., Grietens et al., 2007 and Chan et al., 2006) included mothers only. Percentages of mothers were much higher in five of the studies (65 -80% of the population were mothers), two studies from Italy and Finland had almost equal numbers and one study from Turkey had more fathers than mothers, and one study just said parents without specifying gender.

Both mothers and fathers have been identified as perpetrators of physical abuse, and both mothers and fathers believe in corporal punishment (US Department of Health, 2016). In a study carried out in Kuwait indicated that 86% of both parents believed in corporal punishment as a method of discipline (Qasem et al., 1998). However, while some research reports that perpetrators are mainly the mothers (75% mothers versus 25% fathers) (Sedalk et al., 2010, Department of Health, 2016) other research indicates that perpetrators are most commonly male parents (fathers, step fathers or partners) and that females are blamed due their inability to protect the child, or not leaving an abusive partner, or other reasons (Farmer and Owen, 1998). A study by Schnitzer and Ewigman (2005) in Missouri, United States that looked at child death reports of eight years indicated that 71.2% of abusers were in-fact fathers.

Despite these facts the majority of studies aiming at preventing physical abuse focus on educating or intervening with mothers (Martin, 1984). This could be assumed because of the “stereotype” role of mothers as the primary care givers to children (Martin, 1984, Bradey and Lindsay, 1987, Schaefer et al., 2005). Or to the fact that the responsibility of protecting a child from abuse is perceived as a role of the mother, and by empowering her you are offering protecting to the child (Farmer and Owen, 1998). This is another reason why this research focuses at this stage on mothers.

Six studies (Kutsal et al., 2011, Maria Haz & Ramirez, 1998, Kawamura et al., 2009, Bergamo et al, 2009, Pecnik & Ajdu-kovic, 1995 and Haapasalo

& Aaltonen, 2007), validated the CAPI where parents are known to have a previous history of child abuse and no abuse. Eight studies (Huang et al., 1992, Diareme et al., 1997, Keuning et al., 2002, Chan et al., 2006 and Grietens et al., 2007, Sawasdiapanich et al., 2010, Miragoli et al., 2015, Ellonen et al., 2017) validated the instrument among the general population only.

The study in Turkey (Kutsal et al., 2011) reported that four participants in the study group were illiterate and none in the control group. This study also reported high scores in the study group reaching 451. However, no analysis was carried out to explore the association between the high scores and characteristics of the population. Additionally, in the control group, 35 out of the 47 mothers were recruited by doctors and nurses at the Well Child Clinic, which may have resulted in an element of bias. Twelve were recruited through social services where they were being supported for economic insufficiency, which can carry a risk for abuse.

However, most studies relied on self-reporting of “not being abusive” and only one study reported on measures of screening or ensuring that control families were less likely to be abusive. One study (Haz & Ramirez, 1998), had inclusion and exclusion criteria for parents in the control group, in which they had to have a referral letter attesting that they were “good parents”. The exclusion criteria included a range of child and social issues (child with disability, domestic violence, and unemployment), which if present, resulted in parents being excluded.

The CAPI is a screening tool for child physical abuse only, and using it for other forms of abuse may produce classification errors (Milner & Crouch, 2012). However, in two of the studies, parents were responsible for child physical abuse and neglect (Haapasalo & Aaltonen, 1999 and Pecnik & Ajdu-kovic ,1995) with 66% of parents having a history of neglect in the Croatian study (Pecnik & Ajdu-kovic ,1995).

2.6.1.6 Reporting on Validity Scales

Reporting on the validity indices allows a general acceptance or rejection of the respondent’s scores. In the paper by Pecnik & Ajdu-kovic (1995), only

the Abuse Scale was used for validating the CAPI in Croatia, and the authors reported that they did not use the validity scales as they don't influence the scores of the abuse scale.

Chan and colleagues (2006), in their assessment of the CAPI among Chinese mothers in Hong Kong, carried out an analysis on the sub scores of the abuse scale, but no data on the validity indices were reported in this paper. Similarly, in Thailand (Sawasdipanich et al., 2010), only abuse scores were reported with no assessment of the validity scales being carried out.

Papers from the Netherlands, Italy and Finland (Keuning et al., 2002, Miragoli et al., 2015, Ellonen et al., 2017) reported results from validity indices.

2.6.1.7 Outcomes Measured

- **Percentage of the population scoring above the cut-off score suggested by Milner**

In the study carried out by Milner (1986) 4.8% of the general population scored above the 215 cut-off value. This same value was tested in cross-cultural study as it was the gold standard against which general population samples were tested. However, very few papers were able to obtain results comparable to what was reported by Milner (table 2), and discrepancy varied between scoring as low as 1.8% to as high as 21.9%. However, this value in cross-cultural studies resulted in a range of different percentages (table 4).

Table 4. Percentages of the General Populations Scoring Above the 215 Cut-Off Score

Author	Country	Percentage above 215
Ellonen et al., 2017	Finland	1.8% of mothers and 0.7% of fathers
Miragoli et al., 2015	Italy	6.2%
Kustal et al., 2010	Turkey	21.2%
Grietens et al., 2007	Belgium	4.4%
Zeitschrift et al., 2002	The Netherlands	17%

Maria Haz and Ramirez, 1998	Chile	12%
Diareme et al, 1997	Greece	21.9%
Pecnik and Adjuvenik, 1995	Croatia	10%
De Paul et al., 1991	Spain	8.7%

- **Cut-off scores of the CAPI**

The cut-off scores suggested by Milner (1986) were 215 and 166, for general population and suspected abusers respectively. At these values, the inventory is reported to classify about 80% and 90% of abusers correctly. Kustal and colleagues, (2011) suggested using a cut-off score of 200.5. This was calculated as the average scores of the Turkish sample. The authors attributed the need for developing a different cut-off score for the Turkish population to the high scores reported (i.e. maximum of 451 for the study group and 388 for the control group) and the high difference in means between the two groups (i.e. $M= 200.5$, $SD= 108.6$ for the abuse group, and ($M= 142.9$, $DS= 89.9$ for the control group). Cultural differences in child rearing practices and the acceptance of corporal punishment as a method of discipline was thought to be the reason for the high scores.

The Greek study by Diareme et al. (1997) concluded that there is a need for developing a new cut-off score for the Greek population. This was because the Greek population had scored higher on all scales of the CAPI except for the “Problems with Child Scale”, and similarly attributed this result to differences in parenting practices and attitudes towards child rearing practices among the two cultures. However, the study indicated that the US CAPI scores had correctly classified 78.1% of respondents into the abusive group and 88.6% in the non-abusive group.

Kawamura and colleagues (2009) in the validation of the CAPI in Japan reported that a discriminant analysis between abusers and non-abusers indicated that a value of 159 had distinguished abusers and matched controls. Analysis with the general population indicated a cut off score of 218, which was the discriminatory value obtained from the upper 5% of the

sample population. These values correctly classified 90% for the abuse group and 85% for the general population. The study concluded that these values were equivalent to the 166 and 215 cut off scores suggested by Milner.

Finland, known for its comparatively low rates of child abuse, suggested a cut-off score of 100 for provision of preventive strategies, as only 1.8% of its population scored above 215.

- **Suitability of the translated CAPI to the target culture**

All studies used quantitative methods of assessing the suitability of a translated CAPI for assessing potential for child abuse. None of the papers reported assessing acceptance or relevance of the CAPI through qualitative research.

Maria Haz & Ramirez (1998) assessed the suitability of each item of the scale to the Chilean culture and highlighted that the item related to neatness of a child did not relate to abuse or to social class in the Chilean population. The study concluded that 55 items of the 76 Abuse Scale were discriminatory. The remaining items ranged between non-discriminatory (six items) and not great enough to produce differences among the two groups (15 items).

The Finish study (Haapasalo & Aaltonen, 1999) aimed at assessing potential for child abuse seven years after being involved with CPS. This study used a mixed-method approach whereby structured interviews were used to assess an array of issues related to previous history of abuse and child-rearing practices, following use of the CAPI. Although the CPS group had higher scores than the non-CPS parents, some of them had been identified as being neglectful as well as physically abusive.

- **Reliability**

Internal Consistency Reliability is defined as the way in which various items measuring different constructs in a test deliver consistent results using Cronbach α (Streiner, 2003). Nine studies reported the Internal Consistency Reliability of the Abuse Scale (Huang et al., 1992, Diareme et al., 1997,

Pecnik & Ajdu-kovic, 1995, Keuning et al., 2002, Grietens et al., 2007, Kawamura et al., 2009, Miragoli et al., 2015, Ellonen et al., 2017). All of them reported high scores for α ranging from 0.88 to 0.94.

- **Sensitivity and Specificity**

Sensitivity refers to the percentage of abusive parents who were correctly classified to that group using the CAPI. Four of the included studies have reported on that outcome (Kutsal et al., 2011, Chile, Haapasalo & Aaltonen, 1999 and Diareme et al., 1997), and estimates ranged between 76.5% and 91%. Specificity refers to the proportion of non-abusive parents correctly classified to that group. Findings from the four studies ranged from 71% to 89%.

2.7 Conclusion

The CAPI is a well-validated tool for assessing physical child abuse, with good psychometric properties. Findings of this overview of the literature suggest that is also true for translated versions, although there are limitations in terms of some of the studies reporting the findings from translated versions. The review identified no Arabic versions of the CAPI, thereby supporting the need to translate and test an Arabic version.

The results of this review of both secondary and primary studies indicate the suitability of the CAPI for use in diverse cultural settings as a tool for assessing potential for physical child abuse. However, they also indicate there are some differences in the psychometric properties, which are likely to be due to differences in culture or local practices.

Furthermore, although some of the papers attempted to use a multi-stage methodology for the translation process, this was not the case for all included studies. The process of translating the CAPI is key to producing reliable results. Methodological flaws in the translation process can produce erroneous conclusions and results that are difficult to detect (AlSalhi, 2004). It is important to ensure “semantic and conceptual equivalence” when translating the CAPI as this would affect the validity of data for the translated measure (Milner and Crouch, 2012).

Chapter Three

Research Design and Methods

3.1 Introduction

Chapter two described the literature underpinning this research. This chapter will discuss methods used for carrying out this research starting with description of the over-all research design, hypothesis and questions. As this research was carried out over three phases, description of each arm of the study will be described separately at a later section of the chapter.

3.2 Research Design and Methodology

The research questions raised by this study focus on assessing the reliability, validity and stability of the Arabic adapted CAPI in Oman. As answering such questions (see below) requires the use of both qualitative and quantitative methods of research, both types were used to address the different research questions.

Qualitative methods were used twice during this research: first as part of the initial adaptation process from English to Arabic, and then again at the final stage of the research as a method of triangulation (Begley C.M., 1996, Jones A. & Bugge C., 2006). This was carried out by interviewing a sample of mothers who participated in the longitudinal quantitative phase to explore their personal views on the suitability of the Arabic CAPI to Omani culture and religion. Another aspect was to explore views of stakeholders working in the field of child protection regarding screening for child abuse in general and the use of the CAPI as a screening tool.

Quantitative research methods involved the application of the CAPI with a population of Omani pregnant women, followed by the use of statistical methods for analysis. The analysis aimed at assessing the prevalence of high scores, and assessing the reliability and stability of the Arabic CAPI. The study also aimed to examine the construct validity by exploring the factorial

structure of the Arabic CAPI. All results were compared to the original English CAPI and other cross-cultural translations.

The following sections will discuss the research methods that have been used and applied in the three stages of the research, to answer the research questions raised.

3.3 Research Aims

The principal aim of this research was to assess the reliability and validity of an Arabic version of the CAPI and explore views about its acceptability as a tool for assessing potential for child physical abuse.

3.3.1 Research Objectives

- 1) To produce an Arabic version of the CAPI; through a multi-stage process of translation, adaptation, cognitive debriefing and expert consensus;
- 2) To assess the feasibility of implementing the Arabic translated CAPI using a pilot study;
- 3) To assess the reliability, validity and cut-off scores of the adapted Arabic CAPI in an Omani population of pregnant women;
- 4) To identify socio-demographic characteristics associated with high scores on the CAPI;
- 5) To explore through qualitative research views of stakeholders on the use of the CAPI in Oman.

3.3.2 Research Questions

The study will address the following research questions:

1. How best can the English CAPI be translated to Arabic?
2. How do the results produced by the Omani sample population compare to the original English (US) CAPI and other cross-cultural versions?
3. What are the reliability and validity indices of the Omani CAPI, and how do the results compare with other versions of the CAPI?

4. What is the relationship between high scores and demographic characteristics (mother's age, educational level, parity, number of gap years between current and previous pregnancies)?
5. What is the stability of the CAPI score over time?
6. What are the views of stakeholders (mothers and professionals) about the appropriateness of the Arabic CAPI to Oman's culture and local context?

3.3.3 Research Hypothesis

Hypothesis 1: An Arabic-translated CAPI is a reliable and acceptable tool for screening for potential for child physical abuse in Oman for both parents mothers and fathers.

Hypothesis 2: Results from the Arabic CAPI would be comparable to other cross-cultural translated versions of the tool.

Hypothesis 3: There is a relation between higher abuse scores and local demographic characteristics such as low education level and income.

Hypothesis 4: Score results will remain stable at the two weeks retest of the CAPI

Hypothesis 5: An Arabic version of the CAPI will be acceptable and relevant for use in Oman among the general population and professionals.

3.4 Research Methods

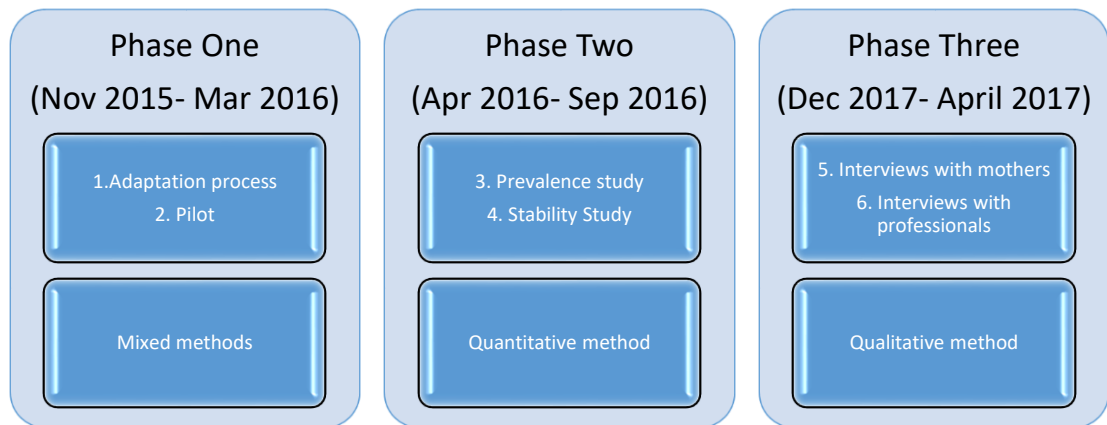
3.4.1 Introduction

This research was carried out in the Muscat Region which is the capital and largest city in Oman. Almost one third of the population of Oman reside in Muscat, which accounts for about 1.56 million (NCIS, 2015) comprising Omanis and expatriates. Muscat is sub-divided into six governorates and spans over 3,500 Square km.

This research consists of six parts carried out over three phases. Both quantitative and qualitative data were collected and analysed consecutively (Figure 2).

The first step was the development of an Arabic CAPI, which was carried out through a lengthy process of translation and adaptation of the English (US) CAPI. The adaptation phase was multi-stage, and involved the use of a Delphi process, cognitive debriefing, back translation, and piloting the adapted CAPI at two primary health centres with a population of pregnant women (n=60). The longitudinal study involved the collection of data from seven primary health centres in Oman at two points in time. The third phase involved one-to-one interviews with 11 mothers from phase two and ten professionals from ministries of social development and health to explore their views on the acceptability and relevance of the CAPI to Oman.

Figure 2. Timeline of Research Methods



3.4.2 Research Governance and Ethics

Ethical approval for carrying out this research was sought from a research ethics committee in the UK, in addition to appropriate bodies in Oman. Approval was granted by the Biomedical Research Ethics Committee (BSREC) from the University of Warwick following some minor concerns concerning the possibility of following all the sites on weekly basis being satisfactorily addressed (Appendix 2).

Ethical approval to carry out the research at health facilities in Oman was granted by the Research and Ethical Review Committee (RERC) (Appendix 3), from the Ministry of Health and no amendments were requested. Once approval was obtained, agreement was sought from the Directorate General of Health Services in Muscat Region, where the study was conducted. The

Director General issued a letter to all health centres to facilitate the conduct of the study.

Following the completion of the longitudinal study, a request for ethical approval along with the qualitative research documents were submitted again to both committees (BSREC and RERC) for approval of this part of the research. Approval was granted by both (Appendix 4).

3.5 Description of Research Methods

3.5.1 Study One: The Adaptation Process and Piloting the Arabic CAPI.

Following literature review, selection of the tool and discussion with experts from Warwick, Oman and the original author of the CAPI (Joel Milner), the process of developing an Arabic CAPI commenced. Adaptation of the CAPI from English to Arabic followed guidelines suggested by the International Society of Pharma-economics and Outcomes Research (ISPOR) on cross-cultural translations of psychometric instruments (Wild et al., 2005; Landerkin, 2005). These guidelines are lengthy and resource consuming but promote good practice in the field of translational research. They suggest using ten steps, which were used iteratively with some modifications to suit local circumstances.

3.5.1.1 Step One: Preparatory Phase

Preparatory phase is a pre-translation step and is critical for assessing the suitability of the tool of choice to the local culture and language it is intended for. This step preceded the translation and involved requesting the author's permission to use the tool, explanation of the concept being researched, selection of a local in-country expert, and obtaining ethical approval for developing the tool. The author of the CAPI was contacted by email and a local in-country expert was contacted for consultation and guidance.

The tool was discussed with an in-country assistant professor from the Sultan-Qaboos University Oman, who is considered as the lead person on Child Abuse and Neglect nationally. The discussion concluded that the

CAPI did not contain items that were offensive to the local community and researching its suitability to Oman was justified.

However, there were doubts about six items, and the author Joel Milner was contacted to obtain his permission on adapting the CAPI to Arabic and to further clarify the ambiguity (discussed further in Chapter 4, Table 7).

3.5.1.2 Step Two: Forward Translation

Following the approval of the CAPI's author (Dr Joel Milner) in 2014 to translate the CAPI from English to Arabic (Appendix 5), two translations of the CAPI were independently carried out. One was conducted by a certified translation agency that carries out medical translation services to provide a "Specialist" translation, and the second by the primary investigator for a "Colloquial" translation.

3.5.1.3 Step Three: Reconciliation

Both translations were reviewed, and compared with the English version to ensure equivalence of the meaning in both languages, along with suitability and clarity of the items to the Omani culture. Both translations were discussed with an in-country expert to reflect on the cultural sensitivity and suitability of tool items to Oman, and to agree a combined version for further testing. Both translations were compared and the most accurate meaning to the source English was chosen (Landerkin, 2005). An Arabic form was finally synthesized for further testing.

3.5.1.4 Step Four: Cognitive Debriefing

Cognitive debriefing was used to assess the comprehensibility, clarity and cultural acceptability of the newly-developed tool with a group of the target population. A multi-stage revision process was carried out which involved E-Delphi rounds, in-depth interviews, and expert consensus.

- **Recruitment**

Through personal communications with officials from ministries and organizations involved with children in Oman, ten individuals were recruited. Criteria for selection included being bi-lingual, having an interest

in research, and access to the internet. When names and contact details of nominees were received, an email explaining the objectives of the study, duration and expectations of their involvement was sent separately to each participant. Individuals who agreed to take part in this research were then asked to return the email consenting to participate. When participants declined to participate, a thank you email was sent to them and a request to their organization was sent for a replacement.

- **Participants**

The following individuals agreed to participate: two social workers from the Ministry of Social Development; three doctors - one was a Paediatrics Accident and Emergency Consultant and two were family physicians from Primary Health Care; two from the Ministry of Education - one teacher and one a school social worker; a Nurse from the Early Intervention Society for children with disabilities; and two parents (a mother and a father).

- **Procedures**

Upon receipt of the consent email, a copy of the translated Arabic CAPI was sent to the participants for review and comments along with the English CAPI. Participants were sent a reminder email on day ten from the first email. Participants who did not respond by the 14th day were sent a reminder email and follow-up phone call. Most participants requested extra time to complete the first revision. If no response was received after 3 weeks, they were considered as having dropped out of that round.

Following the first Delphi round, all comments and feedback were carefully reviewed, categorized and discussed by the researcher and in-country expert to reach consensus and produce a revised version. This second version was sent to the same participants, who were asked to choose between different options where particular discrepancies were found for individual items.

- **In-Depth Interviews**

To finalize the Arabic tool, the participants were invited to be interviewed. The interview was divided into two parts: the first part involved a discussion

of linguistic variations and the second a discussion of the cultural appropriateness of the items.

After incorporating the feedback from respondents, the tool was adapted and both the Arabic and English versions were shared with the in-country expert and a language expert from the language centre at the Sultan Qaboos University, following which minor modifications were made based on their recommendations.

3.5.1.5 Step Five: The Pilot

Pilot testing of the translated version was carried out in two health centres. This step is an added step to the ISPOR guidelines and was carried out before the back translation to test operational logistics and acceptance of the tool by health care providers and local population, particularly because the tool is long and takes 20-30 minutes to fill, concerns were raised to whether the mothers would accept filling it in.

It was expected that 3 participants would be recruited per day, and a set of thirty copies of the study tool was therefore prepared and handed to the nurse in charge; each set contained a patient information leaflet, a consent form, and the Arabic CAPI. Clients were recruited at the antenatal waiting area while waiting for their appointment to see the doctors. The tool was presented to them as a tool for assessing attitudes towards child-rearing practices.

Both health centres were visited on daily basis; Ruwi health centre from 8 to 11 and Wattayah from 11.30 to 2 pm. This was to provide the nurses with support and to address any logistical issues, such as the provision of a quiet place to complete the questionnaire.

Data were collected on a daily basis from both sites, and entered manually on a secure online database that belonged to the distributing company of the CAPI (PARNIC). Double entry was carried out on every 5th form to check the accuracy of data entry. Results were transferred to an Excel spreadsheet for analysis, which involved the use of descriptive statistics (e.g. frequencies, means and standard deviations).

3.5.1.6 Step Six: Back Translation

Back translation is the process of translating the target language tool into the source language with the aim of verifying the translation of the research instrument. The process involves two main components: comparison between the source and target versions and testing both versions on respondents to elicit any differences in their answers (Brislin et al., 1973).

Following the development of the Arabic CAPI with comments from the pilot and the cognitive de-briefing process, the Arabic CAPI was given to an independent translator to translate it back to English, following which a group of participants was recruited to compare the three versions to each other as follows: Target to back-translated version; target to source; and back-translated to source.

3.5.1.7 Step Seven: Back Translations Interviews

To finalize the Arabic tool, the participants were invited to be interviewed. The interview was divided into two parts: the first part involved a discussion of linguistic variations and the second a discussion of the cultural appropriateness of the items.

3.5.1.8 Steps Eight and Nine: Proof Reading and Finalization

After incorporating the feedback from respondents, the tool was adapted and both the Arabic and English versions were shared with the in-country expert and a language expert from the language centre at the Sultan Qaboos University, following which minor modifications were made based on their recommendations. As a result the tool was finalized and was ready to be tested in the next phase.

3.5.1.9 Step Ten: Final report:

The final step involved the production of a report detailing the steps, which were then produced as a paper and submitted to the journal *Child Abuse and Neglect* (AlAbduwani et al., 2017) (Appendix 6).

3.5.2 Study Two: Assessing the Psychometric Properties of the Arabic CAPI

This study involved testing the Arabic CAPI on a population of pregnant mothers at two points of time: initially at (Prevalence Study) and after two weeks (Stability Study).

3.5.2.1 Setting of the Research

This study was carried out in the Ante Natal Care (ANC) Clinics in Muscat Region. These clinics provide routine care for low-risk pregnancy¹ from the inception of pregnancy till 38 weeks of gestation.

3.5.2.2 Sample Size and Calculation

Assessment of the sample size required for this research was underpinned by a number of factors: (1) the required sample size that would provide a sufficiently representative sample to enable generalization of the results to a general population of Omani pregnant women; (2) the practical constraints of recruiting the needed number within the time frame of the PhD; (3) existing data from research studies on the cross-cultural validation of the CAPI.

As there are no studies that have used the CAPI in an Arabic culture it was decided to carry out a sample size calculation using the mean score value produced by the pilot data in the current study, which produced a mean of 153 and SD of 60. In order to obtain results with a 95% CI of (141.2-164.8) it was estimated that a sample size of 100 participants was sufficient.

However, we also aimed to conduct a factor analysis with the data obtained from the main study, and we therefore also examined the guidelines produced by Mundfrom et al (2009) for sample sizes required to conduct factor analysis. The guidelines suggest that for a good criterion when the level of communalities is wide, and the variable-to-item ratio is more than 12 (Abuse scale comprises 77 items), a sample size of 75 is required, and where the variable to factor ratio is 4 (minimum number of the problems

¹ Low Risk Pregnancy is defined as a pregnancy where there is no need for or will not benefit from a medical intervention (ACOG, 2017)

with family scale) the recommended sample size is 300. Guidelines by Comery and Lee (1992) on the absolute number of cases for minimum sample size in factor analysis also reports a minimum of 300 cases to produce good results, 500 for very good and 1,000 or more excellent. Based on the above pilot data, a sample size of 300 would result in a narrower confidence interval (i.e. 146 – 159).

A decision was therefore made to carry out this research on a sample size of 300, which is feasible taking into consideration the recruitment rate of 3/day * 7 health centres = 105/week and 315 in 3 weeks.

3.5.2.3 Sampling Procedures

- **Study Sites**

Seven health centres were randomly selected from a list of 27 health centres in the Muscat Region. To ensure inclusion of all the governorates a health centre was selected randomly from each governorate list by the coordinator at the Directorate General of Health Affairs (DGHA) in Muscat Region.

Meetings were later arranged with the Medical Officer in Charge and the Nurse in Charge to explain the conduct of the research, and responsibilities. If they did not agree to participate, another health centre was selected from the same governorate. Two health centres declined to participate: in one staff requested financial incentive for participating which was not possible and the other had construction work at the time of the research and so would not be able to provide the mothers with the quietness needed for completing the CAPI. Both sites were replaced by another facility from the same catchment area. Each site was given 50 sets of the data collection tool, a lap-tray, stationery, registers and my contact details. A WhatsApp group was also created with a focal person from each site to facilitate discussion regarding recruitment or any other emerging issues.

- **Pregnant Women Sample**

This study was carried out in the waiting area of the Ante Natal Care (ANC) Clinics of the Primary Health Care Centres. These clinics are meant for routine care of low-risk mothers from the inception of pregnancy till 38

weeks of gestation. The mothers were included if they were Arabic speaking with adequate literacy at a level that enabled them to read and complete the tool. The study included mothers who were primi-parous and multi-parous.

3.5.2.4 Data collection tools

- **Demographic Form**

The demographic questionnaire was administered to pregnant women and included questions about demographic and social factors such as respondent's age, gestational age, educational attainment, employment status, type of work and income level, and whether they live in a nuclear or extended family. The questionnaire also asked whether this pregnancy was planned for, if the mother was multigravida, the number of gap years, gravida and parity. Table (5) describes the operational definitions for the variables used in the form. The form is presented in (Appendix 7).

Table 5. Operational definitions for the Demographic Form

Variable	Operational definition
Age	Age of the mother in years as calculated by the date of birth
Gestational Age	Measure of the age of the pregnancy in weeks as calculated from the last menstrual period (if Known) or the first ultrasound scan
Educational level	The highest degree of education the mother has completed, this is ranked as primary (up to 6 th grade), Secondary (up to 12 th grade), graduate and post-graduate
Employment status	Categorized as employed within a paid scheme, or not in paid employment, which includes housewives and retirement
Type of work	The type of paid job the participant undertakes, which is categorized as unskilled, technical or professional

Income level	Family income in the sum of all cash payments, received in a month. Ranked as low income (< 499 OMR), medium (499- 999 OMR), high (> 1000 OMR)
Nuclear family	A living condition that includes birth parents of the child and the child only
Extended family	A living condition whereby the family are living with the grandparents and other members of the family
Planned pregnancy	Mother intending/ wanting to get pregnant and would stop contraception if she was using them
Number of gap years	Number of years between this pregnancy and previous one.
Gravida	Numbers of times a mother has been pregnant
Parity	Number of living children

- **The Arabic Translated CAPI**

The CAPI has been discussed in the previous section. The Arabic-translated CAPI refers to the final Arabic-translated version following the translation process and pilot, detailed previously. All 160 items were preserved and only modifications were made to ensure that the tool suited the local context. The form is presented in (Appendix 8).

- **Client Information Leaflet**

A Client Information Leaflet was provided to interested women to inform them about the research, and encourage them to participate. The information sheet included the time-line and details regarding participation in the stability study. Confidentiality of information and concealment of the results was highlighted in addition to the right of the participant to withdraw at any point. Participants were informed that they will not be able to obtain their individual scores (Appendices 9 & 10).

- **Consent form**

After receiving information about the study, all participants were asked to sign a consent form to indicate their approval to participate in the research. The form is presented in (Appendix 11).

3.5.2.5 Study Governance in Oman

Following the approval of the Omani MOH Ethics Committee, a letter was sent to the Directorate General of Muscat Region, which governs all the five Willayats, informing them about the research and requesting them to cooperate. The researcher later met with each Medical Officer in Charge (MOIC) of the facility to explain about the study and the need to recruit a focal person; the Ante Natal Clinic (ANC) nurse for the implementation of the research. A follow-up meeting with the nurse in charge and the ANC nurse at each participating site was carried out to discuss the study and requirements for participation.

A hands-on training was carried out to familiarize the staff with the forms and train them in how to complete the questionnaire in case the mothers had any questions. The focal nurse was requested to keep a register of all women who agreed to participate, with their contact details. Consent forms, and the CAPI questionnaires were kept with the ANC focal nurse in individual envelopes with serial numbers. Follow up with the focal nurse on the progress of recruitment was carried out on a daily basis via telephone and weekly meetings. Each site was asked to recruit 50 mothers and was provided with a register file to record contact details of the mothers and the study forms. Completed forms were kept in a locked cabinet in the ANC Clinics and were collected by the researcher on a weekly basis.

3.5.2.6 Data Collection

- **Data collection procedures**

The ANC nurse communicated with the women in the waiting area and informed them that a research study on parental attitudes regarding child rearing practices was currently being conducted at the ANC Clinic and gauged their interest in participating. If a mother was interested she

provided her with the client information leaflet for further information. Once the mother approved the nurse entered her name and contact details in the register, asked her to sign the consent form and handed her a package containing the demographic form and the CAPI. The mother was guided to a quiet place and was given a lap-tray on which to place the form for ease of completion.

Mothers were advised to complete the CAPI alone. If, however, she required any assistance or clarification, then she could ask the nurse. Otherwise she was asked to return the completed form.

The forms were coded with no identifiers of the participant's name. All forms were later stored separately in a locked cabinet at the ANC clinics at the health centre, and were collected on a weekly basis.

To increase respondents' confidence about being involved in the research, a number of measures were implemented including incorporating both the Warwick Medical School Logo and the Ministry of Health Logo on the Client Information Leaflet. The researcher's name and email address were also included in leaflet. Respondents were also assured that they would not miss their turn in seeing the doctor, and if they were called before finishing the form, then they could take the form home with them and return it the next day preferably and the nurse made a note in the register. Once the mother returned the first CAPI, the study nurse calculated 2 weeks and noted down the date in the register and on the second form for the stability study.

3.5.2.7 Data management and analysis

Data analysis was undertaken using SPSS version 23. Descriptive and inferential statistics were used to analyze the data obtained. The prevalence of potential for child physical abuse was examined using means and standard deviations for the overall score (Abuse Scale) and subscales (Distress, Rigidity, Unhappiness, Problems With Child and Self, Problems with Family and Problems from Others) along with the three validity indices (The Lie Scale, The Random Response and The Inconsistency Scale). Classification was carried out using Milner's cut off score of 215 and a cut-

off value of the upper 5% in the Omani population. Differences between groups were examined using Chi-square test for the categorical variables and student t-tests for continuous variables by comparing the means and standard deviations. Findings were compared both to the original Milner sample and cross-cultural studies in other countries.

Scores of the CAPI were computed and correlation analysis was carried out with socio-demographic information, in order to assess if there were associations between total scores (high & low) and socio-demographic characteristics, such associations were examined using t-tests.

Reliability was estimated using Cronbach's alpha, using the scale module on SPSS to generate this statistic. The recommended Cronbach's alpha score is 0.7- 0.9, scores lower than 0.7 are considered to represent low levels of consistency and scores higher than 0.95 may reflect duplication of content across items and point to redundancy rather than homogeneity (Streiner, 2003, Lance et al., 2006, Nikiema et al., 2012, George and Mallery, 2007).

The test-retest reliability was assessed over the two weeks interval using Pearson r. The assumption was that scores would not change significantly at the re-test.

Principal Component Analysis was used to explore the hypothesized construct of the Arabic CAPI. This method has been used in the translation of the CAPI in Japan, Spain and Greece (Kawamura et al., 2009, Diareme et al., 1997, Haz and Ramirez, 1998). There are a number of ways of conducting Principal Component Analysis (PCA), and the choice of statistical method to be used. In this research statistical methods used by Milner and other cross-cultural studies that carried out similar trials were replicated. A Scree test for eigenvalue differences and Varimax Rotation were used to determine the appropriate number of factors.

- **Data entry**

An Access database was developed for data entry and analysis using the same weighting scores suggested by Milner. Data were entered manually.

Double entry was carried out randomly to check for data accuracy. Data were later transferred to Excel and then exported to SPSS for analysis

- **Data Storage**

The questionnaire data were stored on the researcher's personal computer and hard drive with a password-protected system. All data will be destroyed 5 years following the research. Only anonymised information was stored on the laptop with no names or contact details. Individual questionnaires were identified by a unique study number and did not include any identifiable data. The identifiable data used for contacting study participants were held in hard copy only in a locked cabinet in Oman for the duration of the PhD. All hard copies will be shredded after three years. The hard copies only have an identification number which correlates with an identification number on the demographic form, which was stored at a different place.

3.5.3 Study Three: The Cultural Acceptance of the CAPI in Oman

3.5.3.1 Introduction

This section illustrates the qualitative techniques employed in terms of the design, sampling selection, recruitment, and interview procedures. The aim of this research was to explore using in depth interviews with stake-holders (mothers and professionals) their views about the CAPI as a tool and the practicalities of implementing it as part of the health system. In addition, the research aimed at understanding attitudes towards parenting programmes as a possible method of shaping parenting practices. The views of the two groups of stake-holders were examined separately - mothers as a group representing the community and professionals from the Ministries of Social Development and Health as another party.

3.5.3.2 Semi- Structured Interviews

Semi-structured interviews were used for this study. An alternative method of Focus Group Discussion was considered initially, but was discarded due to the sensitive nature of this research, and the shy nature of women in Oman making it difficult sometimes to vocalize their opinions. Semi-

structured interviews were thought to give a more private and protective opportunity for women.

3.5.3.3 The Interview Guide

Two interview guides were developed before starting the interview; one was for the mothers and the other was for professionals along with an information leaflet for this part of the research. The interview guide was developed following the longitudinal study and a series of brainstorming meetings with my supervisors at Warwick. The following steps were implemented when developing the guide; the use of open-ended questions, placing the questions in sequence starting with the most general ones, and the use of props and prompt to ensure the continuity of the interview and the ability to explore deep issues (Patton, 1990).

Based on the guide developed for the mothers, questions were developed for professionals, exploring the same main issues in addition to exploring their views about screening for child abuse and neglect in Oman.

Both guides were later translated to Arabic and reviewed in Oman by a local expert in qualitative research to assess their cultural suitability and acceptability (Baalabki and Baalabki, 1999), (Chapter Seven).

3.5.3.4 Information Leaflet

An information leaflet was also developed for this part of the research, explaining the research process, aims and objectives, confidentiality, data security and involvement procedures (Appendix 10).

3.5.3.5 Ethical Clearance

All research documents for this part were re-submitted to BSREC and the Research Ethics Committee in Oman for approval. The approval was granted with no further amendments needed.

3.5.3.6 Sampling

Several methods exist for sampling strategies in qualitative research, and selection of the appropriate method depends on the aim of the research and

available resources. Some of the methods commonly used are; convenience sample, judgmental sample and theoretical sample (Marshall, 1996).

The primary aim of this research was to explore the views and attitudes of mothers who were involved in the longitudinal study on the CAPI and its use in Oman. However, it was thought that it would be of value to understand the views of mothers with different scores; low, intermediate and high, and whether the CAPI score would influence mother's perceptions on the tool. As such a purposive sample was recruited and interviews continued till saturation was reached.

- **Mothers**

Three lists of mothers were generated by my supervisor at Warwick, representing those with high, medium and low scores on the CAPI. I (the researcher) was blinded to their scores to avoid having any subconscious judgment towards the participants. All mothers from the list were contacted by phone to thank them for participating in the longitudinal study and gauge their response to participate in the qualitative research. If they accepted, then copies of the Information leaflet and the CAPI were sent to their local health centre and kept with the receptionist. They were asked to contact me (the researcher) by phone with their answer.

For those mothers who did not respond, a follow up call was made after a week to check if they wanted to participate or not. Once a mother accepted, a meeting point and time was set at her convenience to complete the interview. As these mothers were in the post-natal period, and in the Omani culture mothers in the post-natal period go to their family house for the first forty days and it is not culturally acceptable for her to leave the house, most of them preferred to be interviewed at home. The mothers were asked therefore to provide a point location on "whatsapp" and I would drive to them. Otherwise they were given the option of being interviewed at one of the clinic rooms at their local health centre or any place that suits their circumstance.

- **Professional Informants**

The aim was to have a mixed pool of professionals involved with families with abuse and decision makers from Ministry of Social Development and Ministry of Health as they are the two most prominent stakeholders responsible for child protection. I initiated this phase by requesting a meeting with the Director General of Social Development (MOSD) and the Director General of Health Affairs (MoH). In the meeting I briefly explained the nature of my research and the processes that had been completed, and requested their support in engaging staff from their facilities.

3.5.3.7 Procedures

- **Mothers**

Each interview began with a preamble, that included introducing myself, thanking the participant, congratulating her on the new born, re-capping the aim of this research, setting the parameters of the interview (audio recording and consent form to be signed), assuring confidentiality even if a quotation was made, and the right to withdraw from the study at any stage. The participants were assured that there is no right or wrong answer and that the study is rather interested in their thoughts, views and ideas. Mothers' interviews were carried out in the Arabic language.

The interview then proceeded as per the interview guide and was recorded on a digital recorder. At the end of the interview they were thanked for agreeing to participate.

- **Professionals**

Following similar steps to above, interviews were carried out with professionals from both ministries. Participants were assured that the interview was to ascertain their views on the CAPI and on screening for child abuse, and that no questions would be asked on their opinion of their organization.

3.5.3.8 Data collection and processing

All interviews were digitally recorded as this offers a better opportunity for analysis and preservation of the interviewee's own words. It is, however, more resource and time consuming (Smith and Sharon, 2001, Hancock et al., 2007). All mother's interviews were transcribed, translated and typed by the researcher; this was carried out to immerse myself with the data. As a native Arabic speaker the researcher had no problem in understanding the informant. However, the process proved to be lengthy and a budget was requested from the Omani Cultural Attaché in London, and a transcriber was recruited. All transcriptions were later done in Arabic language, as it is difficult to find a professional and affordable translation/ transcription service that would ensure the exact meaning of the words.

The recorded interviews were fully transcribed noting special circumstances and non-verbal communications.

3.5.3.9 Methods of Analysis

Triangulation in research is defined as the use of multiple sources of data gathering, theories or methods to study one phenomenon in one study (Shih, 1998). The method is generally used for two purposes: convergent validity that aims to confirm a finding in research or to facilitate a holistic understanding to increase the scope of understanding of a specific phenomenon (Shih, 1998). In this research it was used mainly for the second purpose aiming at assessing views of stake-holders on the use of CAPI in Oman. With this theoretical framework, thematic analysis of the interviews was conducted as follows:

- The transcripts were read carefully several times. Interesting and repeated words and ideas were highlighted and marked on the right margin of the transcript.
- Original themes derived from the interview guide were extracted from the text and marked on the left side of the guide. They were used as general themes while the emerging new ideas from units of data were put together as lower levels of subthemes.

- The original themes focused on opinions on the CAPI as a tool, its cultural relevance to Oman, its use in a primary health care setting, and how stakeholders perceived it as a tool for screening for assessing potential towards child physical abuse.
- All analysis was carried out by the researcher; however, one transcribed interview from each category was shared with the supervisors at Warwick and the local expert in Quality research to compare codes and themes extracted.

3.6 Budgeting and Financing

The resources required for this study for data collection and management including the registries for following up the mothers, the demographic forms, and the translated CAPI forms in Arabic were covered by funds available from the Ministry of Higher Education, Oman. For data management the Access software, Excel and the SPSS Data Software are already available from the University of Warwick IT services. I have also been given an administrator access through PRANIC in order to be carrying out the analysis of the CAPI through the software designed by the company free of charge.

A budget was also requested to cover expenses of transcriptions and other logistics from the Omani Cultural Attaché in London.

3.7 Summary

This chapter has presented the methods for the three study arms - adaptation of the CAPI, assessing the reliability and validity of the Arabic CAPI in Oman, and exploring views of stake holders on the CAPI. The next chapters will present the results.

Chapter Four

Adaptation of the CAPI into Arabic Language

4.1 Introduction to Chapter Four

This chapter highlights the process and results of adapting the CAPI into the Arabic language. Before proceeding it is important to distinguish between two terms: test adaptation and test translation. Test adaptation is a process that includes a number of steps such as assessing the suitability of a test to measure a particular construct in a language different from that for which it was originally developed, choosing translators, deciding on appropriate measures for adaptation, and checking its equivalence to the original language. Translation although an important step, is only one step in the adaptation process (Hambelton et al., 2009).

4.2 Procedure

Adaptation of the CAPI from English to Arabic was carried out using a multi-stage methodology that included cognitive debriefing, expert consensus, piloting the tool and back translation (Sidani et al., 2010). Guidelines suggested by the International Society of Pharma-economics and Outcomes Research (ISPOR) on cross-cultural translations of psychometric instruments (Wild et al., 2005; Landerkin, 2005) were used iteratively with some modifications to suit local circumstances (Table 6). Below is an explanation of each of the processes followed by the result.

Table 6. Adaptation process of the CAPI into Arabic using the ISPOR Guidelines

Step	Description	Local Implementation
1. Preparatory Phase	This step precedes the translation and involved: <ul style="list-style-type: none"> • Request for the authors permission to use the tool and explanation of concept areas 	The author Joel Milner was contacted to request permission to translate and validate the CAPI to Arabic language and to confirm this had not previously been done. Discussion was also carried out regarding the meaning of some of the items and

	<ul style="list-style-type: none"> • Selection of local in-country translators and experts 	suitability to Arabic culture. A local in-country expert was invited for consultation and guidance.
2. Forward translation	Development of at least 2 versions preferably by native speakers	Two translations were developed and compared.
3. Reconciliation	Synthesizing all translations into one version by an independent person	Both versions were reviewed and discussed with the in-country expert, and a combined version was developed.
4. Back translation	The foreign language tool is back translated into the source language, to ensure that the same meaning can be derived following translation.	Back translation was carried out by another independent translator and both versions were reviewed for comparison.
5. Back translation review	Review of the back translation against the source copy.	The back translated version was first reviewed by the main author, with agreement from the local in-country expert and academic supervisors at the University of Warwick. It was later assessed at 3 different settings, Arabic versus back-translated English, English back-translated versus source, and Arabic versus source.
6. Harmonization	Detect and sort out translational discrepancies.	This was carried out through interviews with participants, followed by consensus meeting with a local expert.
7. Cognitive debriefing	Review translational alternatives with a local population.	This was carried out through an E-Delphi process followed by interviews.
8. Review of cognitive debriefing results and finalization	Assess conceptual equivalence.	Feedback from participants was reviewed and combined into one version.
9. Proof reading	Check for minor errors that were	The final version was checked and reviewed.

	missed while editing	
10. Final report	Report is written on the development of the translation.	Writing an article on the methods used.

4.2.1 Cognitive Debriefing

Following the development of the first draft of the Arabic CAPI, cognitive debriefing was used to assess the comprehensibility, clarity and cultural acceptability of the newly-developed tool with a group of the target population. A multi-stage revision process was carried out which involved E-Delphi rounds, in-depth interviews, and expert consensus.

Through personal communications with ministries and organizations involved with children in Oman, ten individuals were recruited. Criteria for selection included being bi-lingual, having an interest in research, and access to the internet. When names and contact details of nominees were received, an email explaining the objectives of the study, duration and expectations of their involvement was sent separately to each participant. Individuals who agreed to take part in this research were then asked to return the email consenting to participate. When participants declined to participate, a thank you email was sent to them and a request to their organization was sent for a replacement.

Upon receipt of the consent email a copy of the translated Arabic CAPI was sent to the participant for review and comments along with the English CAPI. Participants were sent a reminder email on day ten from the first email. Participants who did not respond by the 14th day were sent a reminder email and follow-up phone call. Most participants requested extra time to complete the first revision. If no response was received after 3 weeks, they were considered as having dropped out of that round.

Following the first Delphi round, all comments and feedback were carefully reviewed, categorized and discussed by the researcher and in-country expert to reach consensus and produce a revised version. This second version was sent to the same participants, who were asked to choose between different options where particular discrepancies were found for individual items.

4.2.2 In-Depth Interviews

To finalize the Arabic tool, the participants were invited to be interviewed. The interview was divided into two parts: the first part involved a discussion of linguistic variations and the second a discussion of the cultural appropriateness of the items.

After incorporating the feedback from respondents, the tool was adapted and both the Arabic and English versions were shared with the in-country expert and a language expert from the language centre at the Sultan Qaboos University, following which minor modifications were made based on their recommendations.

4.2.3 The Pilot

Pilot testing of the agreed translated version with a local population was carried out in two health centres. This was an additional step and was carried out before the back translation to test operational logistics and acceptability of the tool by health care providers and a local population.

It was expected that 3 participants would be recruited per day, and a set of thirty copies of the study tool was therefore prepared and handed to the nurse in charge; each set contained a patient information leaflet, a consent form, and the Arabic CAPI. Clients were recruited at the antenatal waiting area while waiting for their appointment to see the doctors. The tool was presented to them as a tool for assessing attitudes towards child-rearing practices.

Both health centres were visited on a daily basis to provide the nurses with support and to address any logistical issues, such as the provision of a quiet place to complete the questionnaire.

Data were collected on a daily basis from both sites, and entered manually on a secure online database. Double entry was carried out on every 5th form to minimize data entry errors. Results were transferred to an Excel spreadsheet for analysis, which involved the use of descriptive statistics (e.g. frequencies, means and standard deviations).

4.2.4 Back translation

Back translation was carried out as followed: Target to back-translated version; target to source; and back-translated to source.

4.3 Results

4.3.1 Preparatory Phase

Following forward translation, a number of items were identified as presenting potential issues with cultural sensitivity and suitability within the Omani/Arabic context: “I enjoy having pets”; “Spanking that only bruises a child is okay; “My telephone number is unlisted”; “Sometimes I worry that I will not have enough to eat”; “I have a good sex life”; and “Right now I am deeply in love”. Following discussion with the in-country expert and the author (Table 7), it was decided not to delete any of the items of the CAPI at this initial stage and to seek opinion from the local community.

Table 7. Discussion of Ambiguous items with the Author (J. Milner)

Item number	My concern	Milner Response
#2 I enjoy having pets	Having pets in Oman is not a common practice particularly dogs for religious values.	Given the views on pets in Oman, you can delete this item.
#10 spanking that only bruises a child is okay	As most people in Oman are colored, I am concerned about losing cases of mild to moderate abuse that does not lead to bruising.	This item was not of concern when used with black race as it is not race specific.
#32 My telephone number is unlisted	The item is outdated as many people use mobile phones with prepaid chips, which are not generally listed	Un-listing a telephone number is an optional request, however item can be deleted.
#36 Sometimes I worry that I will not have enough to eat	This question in its current format is not applicable and may be offending.	Item can be deleted.
# 141 I have a good	Culturally	Might be intrusive and

sex life	inappropriate.	item can be deleted
# Right now I am deeply in love	Culturally inappropriate	Might be intrusive and item can be deleted

4.3.2 E-Delphi Process

Ten individuals were identified through personal approaches to ministries and organizations involved with children and families and agreed to participate: two social workers from the Ministry of Social Development; three doctors - a Pediatrics Accident and Emergency Consultant and two family physicians from Primary Health Care; two professionals from the Ministry of Education - a teacher and a school social worker; a Nurse from the Early Intervention Society for children with disabilities; and two parents (a mother and a father).

Eight out of ten participants responded to the first round of the review with suggestions to rephrase 73 out of the 160 items. Suggestions were mainly grammatical in nature. One participant thought that two items were not relevant to the Omani culture (“having a pet” and “telephone number not listed”).

On the second round, seven participants responded with agreement on 62 of the 73 amended items. Three items had minor differences and eight items were thought to require final discussion and approval through the in-depth interview (Table 8).

4.3.3 In-depth Interview

Three participants agreed to be interviewed: two were interviewed face-to-face and one by telephone. Of the eight items debated, three were resolved by further linguistic modifications and the following five remained controversial: I love having pets; my phone number is not listed; right now I am deeply in love; I have a good sex life; sometimes I worry I don’t have enough to eat.

4.3.4 Results of Back Translation

The back-translated Arabic to English Tool: the back-translated version that was carried out by the professional translator was reviewed and compared with both Arabic and original English versions. Overall, the back translation was thought to be satisfactory. Nine items used complex language and needed rephrasing, two gave a different meaning to what was intended, and one item was missed from translation because the language used was thought to be too technical. Both versions were filled by the in-country expert and no differences were found.

Target to back-translated: three out of seven participants had discrepancies in their responses to the Arabic and the English back-translated versions. An interview was carried out to explore reasons for the discrepancies; this highlighted the following issues:

1. The first participant indicated that the tool was too long and that she paid more attention to the first copy that was completed (Arabic); this was resolved when the tool was re-administered at home in a quiet environment
2. The second participant indicated that he addressed each of the questions to himself and that where he was not certain as to whether he agreed or disagreed, he answered agree on one and disagree on the other. However, these discrepancies were resolved through discussion and consensus.
3. The third respondent felt that some items were not culturally appropriate, specifically: *I enjoy having a pet; A child in a mud puddle is a happy sight; Teenage girls need to be protected; I am always a good person;; I am currently in love, My telephone number is unlisted.*

Arabic to source: Both Arabic and source (the original CAPI developed by Milner) were given to a bi-lingual associate professor at the Sultan Qaboos University Hospital, and she was asked to complete them separately. All items matched in both versions, but the respondent had reservations about

two items: “I have a child who is clumsy” and “sometimes I worry that I don’t have enough to eat”.

Finally all feedback was reviewed and discussed with the in-country expert and the supervisors at the University of Warwick with the following amendments (Table 8).

Table 8. Local Amendments to the CAPI

CAPI item	Responses from interviewees	Agreed item
I love having pets	Responses of participants were discrepant in that one thought that the habit of keeping pets at home was not relevant in Oman, and two thought that it was relevant. As population structures have changed in Muscat recently and more people are keeping animals as pets today	I Love animals It was agreed that the item was relevant and should not be deleted. However pets was changed to animals to reflect the wider community of Omani population out of the capital Muscat.
My phone number is not listed	All three participants thought this item is outdated and does not have the same meaning as it may have had when the tool was developed.	My telephone number is confidential Agreed to modify this item to reflect modern culture. The term not listed was changed to confidential.
Right now I am deeply in love	Participants did not feel this item was appropriate in the Omani culture.	I enjoy a stable married life Item was changed to I enjoy a stable married life.
I have a good sex life	One participant felt this item was inappropriate, while a second felt that it is fine because forms are confidential, and the third felt it is ok to ask about it provided the question refers only to	Item remained unchanged.

	sex within a marital context.	
Sometimes I worry I GRQW KDYH HQR} to eat.	Participants felt this item does not reflect the economic level of the people residing in Oman.	Sometimes I worry I GRQW KDYH HQR} till the end of the month
A child in a mud puddle is a happy sight	This respondent thought that while seeing the happiness on the child's face playing outdoors is good, it would not be considered good for them to be playing in a mud puddle because a number of children drown in mud puddles every year.	The happiness on a FKLOGW IDFH SOD\ outdoors is a happy sight
Teenage girls need to be protected	The word "protected" in Arabic translated to 'physical guarding' rather than guarding involving parenting or guidance, and it was therefore suggested that this be changed to "teenage girls need guidance and supervision". This may also reflect cultural variations in parenting style in which Eastern families enforce a higher level of supervision and regulations on girls.	Teenage girls need guidance and supervision.
I am always a good person	The concept of being "always" good is controversial in Islamic religion in which only God is thought of as the flawless, Holy One, whereas humans makes mistakes, and thus cannot always be good. It was suggested that 'always' be	The item was changed to I am often a good person

	replaced by ‘often’.	
I have a child who is clumsy	It was felt that the term “clumsy” is offensive when translated into Arabic Language	I have a child who makes a lot of mistakes

4.3.5 Results of the pilot

The mean age of the mothers was 29.87 years (SD= 4.678) and the education level was 13 years (SD=1.9), and all mothers were married.

The recruitment rate was 3 to 5 participants per day and mothers took 20 to 30 minutes to complete the CAPI. The mean score value of the abuse scale was 155.8 (SD= 59.4), with a range of 25-286. Eighteen percent of the pilot population scored above the cut off value of 215, making the classification rate for low abuse potential 82%.

The pilot showed differences in mean abuse scores between the 2 health centres: Abuse scores were higher at Ruwi (M=164, SD= 68.4) compared to Wattayah, (M=147, SD= 49) with more cases reported above the 215 cut-off value.

4.4 Summary of findings

A culturally-sensitive approach necessitates ensuring conceptual, item, semantic, operational, and measurement equivalences. Adaptation of this tool involved addressing each of these issues. When there were no difference items remained the same, but where there were differences, items were re-worded ensuring preservation of the original English meaning.

The pilot testing of the CAPI indicated that the tool was appropriate to use with a wider population and that logistically it is feasible to carry out this research in Oman. The next phase of the research assessed the reliability, stability and validity of the tool with a population of pregnant women attending the Ante Natal Clinics at primary health care.

This chapter presented the process and outcomes of the adaptation process. Discussion of the findings and comparison of them with similar processes from other countries will be presented in the discussion chapter.

Chapter Five

Results of the Longitudinal Study

5.1 Introduction

Chapter three presented the research design and methodology for this study including the research ethics and methods of data collection. This chapter reports on the findings of the longitudinal study, which was aimed at assessing the psychometric properties of the Arabic CAPI. This chapter presents the results in terms of the demographics of the study population, descriptive statistics for the CAPI, the stability of scores over two weeks, regression analysis of the CAPI scores and predictive demographic factors.

5.2 Method of the Research

This research was carried out in Muscat which is the capital and largest city in Oman. The city is sub-divided into six governorates and spans over 3,500 square meters. One province was excluded due to accessibility difficulties. To reach the desired sample size the research was carried out in seven health centres. These sites were randomly selected, ensuring at least one health centre was included from each governorate

For each selected health centre that agreed to participate, a meeting was arranged with the Medical Officer in Charge and the Nurse in Charge to explain the research and allocate responsibilities. A core team was set at each facility to discuss recruitment of the mothers, research logistics, study documents, data security and governance. Staffs were asked to familiarize themselves with the CAPI items and raise any concerns they had.

A sample size calculation was conducted to assess the sufficient number of mothers needed for the validity and reliability study. The number of mothers was selected to fulfill three criteria; effect size, factor analysis and practicalities of carrying out this research within the time and resources allocated. Based on this, a sample with 300 mothers was chosen as this

would provide an 80% power to detect a standardized difference of 0.38, which is between a small and medium difference (Cohen, 1988). It was also sufficient to carry out a Factor Analysis with good results (Comery and Lee, 1992). Pragmatically, it seemed reasonable to ask each site to recruit 50 mothers.

Mothers were recruited from the waiting area of Ante Natal Care Clinics at primary health care centres. These clinics are meant for routine care of low risk mothers from the inception of pregnancy till 38 weeks of gestation.

5.3 Response rate

5.3.1 Prevalence study

Fifty forms were given to each health centre making a total of 350 forms. Of the total forms given, 320 were returned by the women. All forms were reviewed and 11 were discarded due to incomplete data, giving a response rate of 88%. These mothers met the inclusion criteria and were pregnant Omani women with gestational age of less than 37 weeks (Table 9).

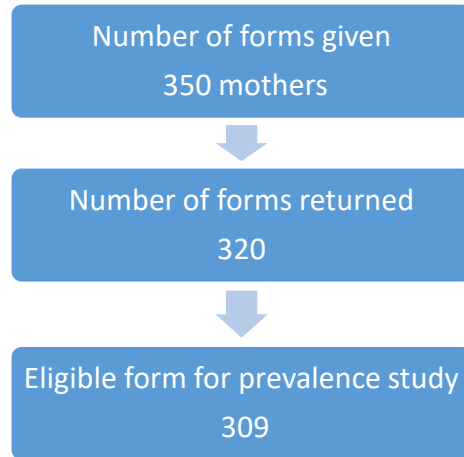
Table 9. Response Rate Data by Health Centre

Health Centre	Location	No of mothers
Amerat (AM)	Amerat	44
Athaiba (ATH)	Bausher	46
Khuwair (KH)	Bausher	40
Mawaleh (Maw)	Seeb	38
Muscat (Mus)	Muscat	43
Ruwi (RH)	Muttrah	51
Wattayah (WH)	Muttrah	47
Total		309

5.3.2 Stability study

Of the sample of 309 mothers who completed the Arabic CAPI, 96 of them also returned a completed form at two weeks, yielding a response rate of 31% of the sample (figure 3).

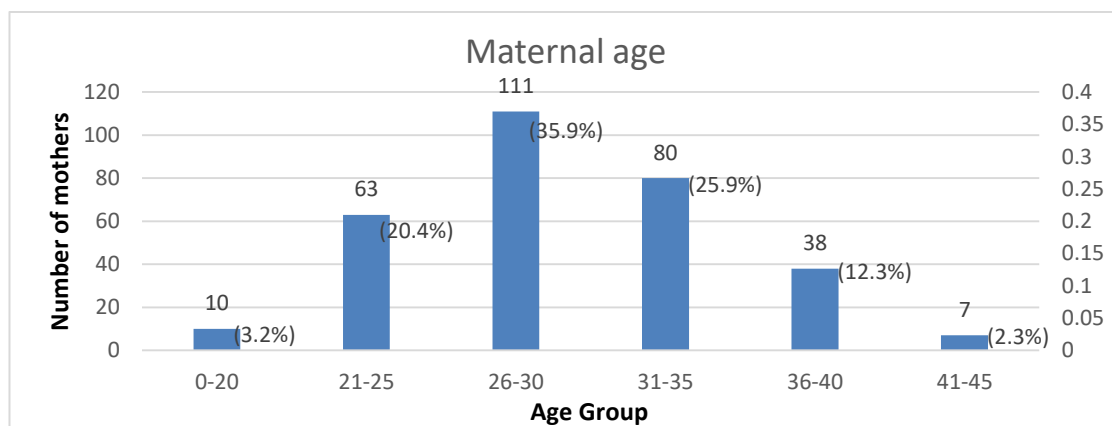
Figure 3. Flowchart of response rate in the longitudinal study



5.4 Socio-Demographic Characteristics of Participants in the Longitudinal Study

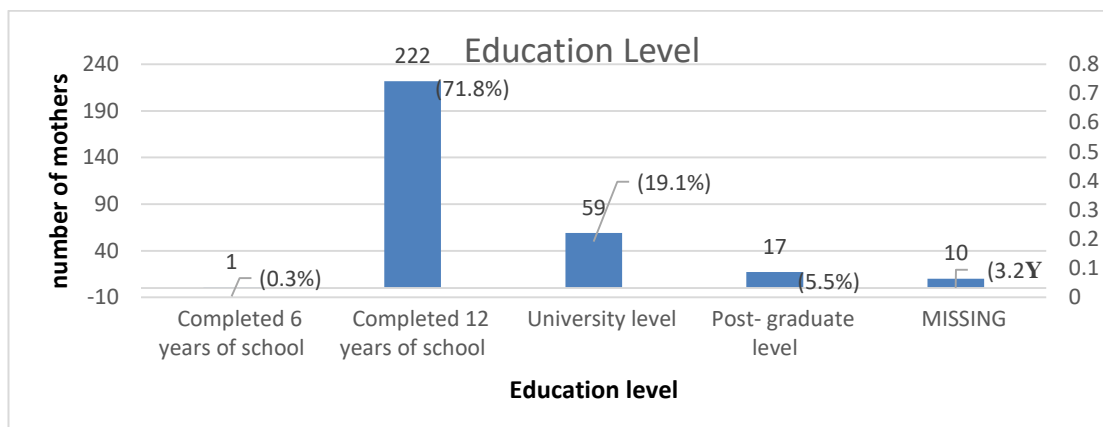
Data were analyzed using IBM SPSS 23 software for statistical analysis. Table 10 below shows the characteristics of participants in the prevalence study. The mean age of the sample was 29.75 years (SD = 5.38) (figure 4) and all the mothers were married at the time of completing the forms. As in other Muslim countries, it is illegal in Oman to get pregnant without being formally married. The sample was composed entirely of Omani women because in Oman general health services are provided for Omani people and expatriates are expected to seek their health needs from the private sector.

Figure 4. Distributions of Mothers by Age



Two hundred twenty-two (71.8%) of the population had completed twelve years of school education, fifty nine (19%) had completed university level, and 17 (5.5%) were considered highly educated holding a post-graduate degree (figure 5).

Figure 5. Distribution of Mothers by Education Level



Most mothers were unemployed and had completed at least twelve years of school, with a proportion having gone on to university or higher education (Table 10, Figures 4 and 5).

Table 10. Baseline Characteristics of Study Population

Demographic variable	Value	Percentage
Employment Status		
Unemployed	216	69.9%
Employed	26	8.4%
Missing	67	21.7%
Type of family		
Nuclear	220	71.2%
Extended	76	24.6%
Missing	13	4.2%
Monthly income		
500 OR		45.3%
501-1000 OR	140	26.9%
1001-1500 OR	83	9.4%
More than 1500 OR	29	2.3%
	7 50	

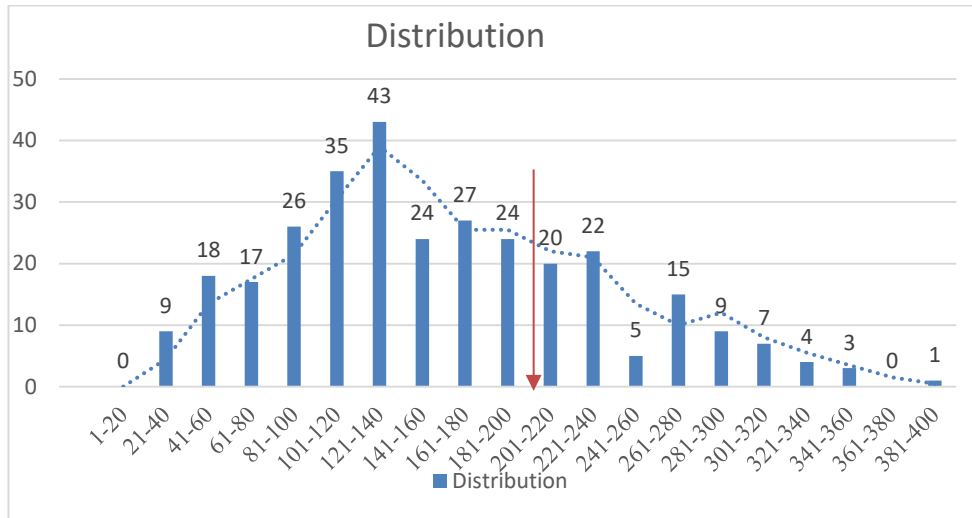
MISSING		16.2%
Number of children below 18		
None	140	45.3%
One	55	17.8%
Two	51	16.5%
Three or more	63	20.4%
Mean	1.32 SD= 1.19	
Mean gestational age	15 Weeks, SD=11.47	
Mean gap between pregnancies in years	1.63, SD= 2.04	
Was this pregnancy planned for		
Yes	147	47.6%
No	162	52.4%

5.5 Results of the Longitudinal Study in Oman

5.5.1 Mean Score and Percentage of Participants Scoring Above the Cut-Off Value Of 215

The mean CAPI score for the whole sample was 159.2 (SD= 75.2; range 26-390). Seventy-two mothers (23.3%) scored above the cut-off score of 215 suggested by Milner. The lowest score in the Omani population was 26 and the highest was 390 (figure 6).

Figure 6. Distribution of the CAPI Scores in the Omani Population



5.5.2 Comparison of Socio-Demographic Characteristics of Participants Scoring Above and Below the 215-Cut-Off Score

Table 11 shows the socio-demographic characteristics of participants scoring above and below 215. Comparison of the two groups was conducted using t-test for continuous data and chi square for categorical data. The results show that while there was a trend towards those mothers who scored high on the CAPI being less likely to have received university education, more likely to be unemployed, and more likely to have a low family income, none of these differences reached statistical significance.

Table 11. Demographic Characteristics of Participants Scoring Above 215 and Below 215

Demographic variable	Total Sample N=309	CAPI < 215 N= 237 (76%)	>= 215 N=72 (24%)	T Value/ Chi square	P Value
CAPI Score					
Mean	M= 159.6	M= 126	M=267		
Standard Deviation	SD= 5.9	SD= 47.9	SD= 40.3	-22.6	0.05
Min	26	26	215		
Max	390	213	390		
Age					
Mean	M=29.8	M= 29.9	M= 29.3		
Standard Deviation	SD = 5.	SD= 5.4	SD= 5.4	-1.1	0.7

Deviation Minimum Maximum		18 45	18 43		
Education level					
Completed 12 years of school and below	223 (71%)	167 (71%)	56 (80.0%)	1.4	0.24
University level and above	77 (24.5%)	62 (27%)	14 (20.0%)		
Employment Status					
Unemployed	217 (69.3)	163(69%)	53 (73.6%)	3	0.1
Employed	27 (8.6%)	24 (10%) 50 (21%)	2 (2.8%) 17 (23.6%)		
Type of family					
Nuclear	220 (71.2%)	168 (71%)	52 (72.0%)	0.21	0.64
Extended	76 (24.6%)	60 (25%)	16 (22%)		
Missing	13 (4.2%)	9 (4%)	4 (6%)		
Monthly income					
Up to 500 OR	141 (45.6%)	104 (51%) 68 (33%) 31 (10%)	36 (64%) 14 (25 %)	3	0.2
501-1000 > 1001 OR	84 (27%) 37 (11.4%)	34 (15.3%)	6 (11%) 16 (22%)		
MISSING	47 (16%)				
Number of children\					
0	140 (45.3%)	111 (47%)	29 (40%)	2.46	0.46
1	55 (17.8%)	43 (18%)	12 (16.7%)		
2	51 (16.5%)	35 (15%)	16 (22%)		
≥ 3	63 (20.4%)	48 (20 %)	15 (21%)		
Mean gestational age	15 Weeks, SD=11.47	14.6 Weeks SD= 11.6	16 Weeks, SD= 11.1	-1.1	0.7
Mean gap years	1.33, SD=1.69	M= 1.63, SD=2.1	M= 2.1, SD= 3.7	-0.5	0.6

5.5.3 Distribution of Cases by Health Centre

Using Chi square, analysis was carried out to assess if there were differences between health centres scoring above and below the 215-cut-off value. Results indicated that the highest percentage of mothers scoring

above 215 were in Al Kuwair and Muscat Health Centres (30% & 30.3%) (Table 12). However, this result was not statistically significant (Chi square 3.28, $p= 0.773$).

Table 12. Distribution of CAPI Score per Health Centre

Health centre	CAPI < 215	&\$,•	Total
Amerat	34 (77.3%)	10 (22.7%)	44
Athaiba	38 (82.6%)	8 (17.4%)	46
Khuwair	28 (70.0%)	12 (30.0%)	40
Mawaleh	29 (76.3%)	9 (23.7%)	38
Muscat	30 (69.8%)	13 (30.3%)	43
Ruwi	41 (80.4%)	10 (19.6%)	51
Watayah	37 (78.7%)	10 (21.3%)	47
Total	237 (76.7%)	72 (23.3%)	309

5.5.4 Distribution for the Child Abuse Factor Scales

The Abuse Scale in the original English language CAPI is composed of six factor scales which are Distress, Rigidity, Unhappiness, Problems with child and self, Problems with family, and Problems from others. These factor scales should not be used separately for classification of predictive responses, but they may give an indication as to which dimensions of abuse are contributing to the total score. Table (13) below provides a comparison between results obtained from Oman and the U.S.

Results indicate that mothers in Oman have scored much higher on factors related to distress, rigidity and problems from others. The distress factor represents personal distress as perceived by the respondent and indicates the presence of personal adjustment which results from parenting stress. ‘Rigidity’ defines a rigid parenting style and is specific to respondent’s attitude towards the appearance and behaviour of the child. ‘Problems from others’ measures general difficulties in social interactions and those relationships are viewed as disappointments rather than support.

Table 13. Comparison between Oman and U.S Abuse Factor Scale

Factor Scale	U.S mean (SD)	Oman Mean (SD)
Distress	58.0 (56.8)	90 (58)
Rigidity	10.1 (12.5)	39.8 (15.6)
Unhappiness	8.1 (9.2)	7.1 (8.4)
Problems with Child and Self	2.8 (5.2)	3 (5.3)
Problems with family	6.0 (7.0)	7 (7.18)
Problems from others	6.4 (8.6)	9.98 (7.0)

5.5.5 Distribution for the validity Scales

In addition to the abuse scales, the CAPI contains three validity scales: The Lie Scale; the Random Response Scale; and the Inconsistency Scale. Scores from the validity scales do not influence the abuse scale; they are, however, used in different combinations to form indices of response bias (Faking-good, Faking-bad, and Random Response index). These indexes are assessed for acceptance or rejection of respondent's results to the Abuse scale. If any of the validity indexes are elevated, the abuse score is not considered to be a true representation of the respondent's actual potential (Milner, 1986).

Results from Oman indicated elevated means for all the three indices (Table 14). This was particularly evident in the Lie Scale and the Inconsistency Scales, where means were almost tripled for the Lie Scale and doubled for the Inconsistency Scale.

Table 14. Comparison of the Mean and Standard Deviation of the Validity Indices between Oman and the US

Validity Scale	U.S mean (SD)	Oman Mean (SD)
The Lie Scale	3.5 (3.1)	9.5 (3.2)

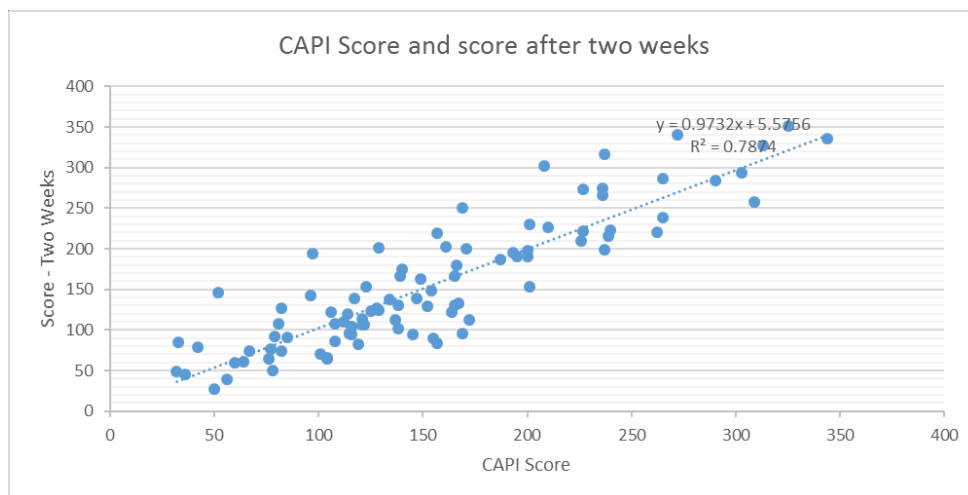
Inconsistency	2.8 (2.1)	5.6 (2.4)
Random Response	2.2 (1.4)	3.6 (1.73)

5.5.6 Stability of the CAPI Scores

We hypothesized that the mean for the child abuse score would remain stable over a two-week period. To test this hypothesis the mean child abuse score was computed at the outset (M= 159.2, SD= 75.2) and again after two weeks (M= 154.4, SD= 78.2). Prior to conducting the analysis, the assumption of normality was tested, and results were found to be normally distributed.

Inspection of the stability estimate for the CAPI scores over two weeks was carried out using Pearson-r and reliability was assessed using Cronbach's alpha. The Pearson ($r = .89$) and the internal consistency was ($\alpha = 0.94$) (Figure 7). Therefore, test re-test reliability was considered satisfactory. The mean gain score was also computed across all responses at 2 weeks and was equal to 1.87. This is lower than the score computed by Milner which was 4.97.

Figure 7. Stability of the CAPI Scores



5.5.7 Summary of findings

To establish preliminary data on Oman scores for the CAPI, mean scores and standard deviations were calculated for the Abuse Scale and its six sub-categories, and three validity indices.

Results showed that the percentage of pregnant women scoring above the 215-cut-off value is much higher in our sample (23%) than in the original US study (12%). This was also reflected in calculating the mean abuse score which stood at 159.2 (SD= 75.2) for Oman compared to 91 (SD=91) for the US. No statistically significant differences were identified in the demographic characteristics between the population scoring above and below 215.

Examining the factorial structure of the Abuse Scale indicated highly elevated means for distress and rigidity in the Omani population compared to the US population. This elevated result was also observed in the validity tests for the Lie and Inconsistency Scales.

In summary, there were substantial differences between the Omani CAPI and the US CAPI which was reflected in most parameters assessed. Results remained stable at two weeks re-testing period.

Although the results of this study are dissimilar to the American data regarding the CAPI, findings are consistent with those of cross-cultural versions of the CAPI, and in particular with findings from Turkey, Chile and Greece, where 21%, 19% and 22% of the population scored above 215. These findings suggest the need for an adjusted cut-off score as there are differences in parenting styles that can explain such differences when using the CAPI in a different culture.

The mean score values for these countries were also higher than the American samples and stood at 142.9 for Turkey, 145 for Greece and 151 for the Croatian populations.

5.6 Identification of an appropriate cut-off value

Using the 215-cut-off score suggested by Milner classified almost a quarter of the Omani population as having a high potential for child physical abuse. This result is not realistic in terms of managing the resulting identified cases and thus, a new-cut-off score was computed using the upper 5% of his sample. In Oman computing the 95th percentile indicated a cut-off score

value of 303. Using this cut-off score 15 mothers (4.95%) were found to be scoring higher than 303.

The demographic characteristics of the mothers scoring above and below the new cut-off score are presented in (Table 15). Although not statistically significant, results suggest a trend towards an increased level of education, higher employment, and higher income in the group with scores below the threshold of 303.

Table 15. Demographics of Mothers Scoring Above 303 and Below 303

Demographic variable	CAPI < 303	&\$,•	T value	P value
Sample size	294 95%	15 5%		
CAPI Score Mean Standard Deviation Min Max	M=150.56 SD= 66.1 26 299	M= 328.7 SD=23.6 307 390		
Age Mean & SD Minimum Maximum	M= 29.85, SD=5.37 18 45	M=27.8, SD= 5.44 19 37	.937	.864
Education level Completed 12 years of school University level Post- graduate level MISSING	209 (71%) 59 (20%) 16 (5.4%) 10 (3.4%)	14 (93.4%) 1 (6.6%) 0 (0%)	2.929	.087
Employment Status Unemployed Employed Missing	201 (88.5%) 26 (11.5%) 67 (22.8%),	15 (100%) 0 (0%)	1.925	.165
Type of family Nuclear Extended Missing	73 (24.8%) 208 (70.7%) 13 (4.4%)	3 (20%) 12 (80%) 0 (0%)	0.267	0.606

Monthly income	131 (44.6%)	9 (60%)	3.987	.141
500 OR	81 (27.6%)	2 (13.3%)		
501-1000 OR	29 (9.9 %)	0 (0%)		
1001- 1500	7 (2.4%)	0 (0%)		
OR	46 (15.6%)	4 (26.7%)		
> 1500 OR				
Missing				
Number of children	135 (46%)	5 (33.3%)	1.529	.676
0	52 (18%)	3 (20 %)		
1	47 (16%)	4 (26.7%)		
2	60 (20 %)	3 (20 %)		
≥ 3				
Mean gestational age	M= 14.95 SD= 11.5	M= 15.5 Weeks SD= 10.9	.077	.654
Mean gap years	M= 1.59 SD=2.03	M= 2.2 SD= 2.24	-.698	0.475
Was this pregnancy planned for				
Yes	142 (48%)	5 (33.3%)	1.282	.258
No	152 (52%)	10 (66.7%)		

5.7 Predictors of the CAPI score

To examine the effects of demographic variables on the Abuse scale scores, the method of stepwise linear regression was used with predictors such as education level, employment status, monthly income, living conditions, age of the mother and number of years between this pregnancy and previous one and abuse score. Tests for multicollinearity indicated that a low level of multicollinearity was present (VIF= 1.39 for education, 1.35 for employment status, 1.10 for living conditions, 1.06 for client age, 1.12 for monthly income and 1.06 for pregnancy gap). A simple linear regression analysis was performed at a first step to assess the association of predictors mentioned above on the abuse score (Table 16).

No significant relationship was found with education, employment status, age, living conditions and pregnancy gap year. However, the only association found was between income level and abuse score, whereby ($F= 14.0$, $p < 0.000$). The R^2 value was 0.44 indicating that almost 44% of variations in abuse scores can be explained by variation in income level.

Table 16. Linear Regression Analyses between Predictors and Abuse Score

Parameter	F	R•	Pearson <i>r</i>	Sig	95% Confidence Interval	
					Lower	Upper
Education Level	1.359	.005	- 0.67	.245	-23.7	6.06
Employment status	2.319	.010	- 0.98	.129	-55.9	7.16
Monthly income	14.0	.044	-.209	.000	-0.80	-0 .025
Age	0.98	.000	.018	.754	-1.828	1.326
Living conditions	.169	.001	0.24	.68	-15.8	24.1
Pregnancy Gap	.008	.000	.005	.930	-3.956	4.329

5.7.1 Summary of Results

The high percentage of mothers scoring above the cut-off score of 215 necessitated using the 95th centile of the Omani score which equated to 303 and comparing the two populations to see if there are significant statistical differences between the two groups.

Regression analysis was also carried out to establish any association between high scores and demographics; none of the factors studied were found to correlate with high scores, except for income level which correlated negatively, i.e. the lower the income the higher the scores. This association was not observed with the Chi-square test, possibly because of the small size number of mothers with the higher score and the high proportion of missing values.

The next stage of this research aims at exploring the validity of the CAPI using factor analysis, and reliability using Cronbach's alpha.

5.8 Summary of Chapter Five

Using the cut-off score suggested by Milner has classified almost 23% of this Omani population as having a high potential for abuse. This result

although higher than the US sample is close to data published from Greece and Turkey where 78% and 78.8% were classified as low potential for abuse. However, the high percentage of high scores necessitates an adjusted cut-off score (Diareme, 1997). Specifically, the absence of a statistically significant difference was computed between mothers scoring above and below 215 ($P = .053$). Using Milner's criteria a new cut-off score of 303 is suggested but this needs further research by testing the tool in a population with a history of abuse and not.

In terms of risk, this study aimed to explore the association of factors documented in the literature to represent a higher risk of abuse. It found that although there were higher percentages of mothers from lower income and education in the higher score groups, differences were statistically insignificant. Linear regression analysis indicated a possible association with income level but not with the other factors.

Chapter Six

Psychometric properties of the Arabic CAPI: Reliability and Validity

The previous chapter presented the findings with regards to the socio-demographic characteristics of the population involved, the prevalence of mothers scoring above the cut-off score (215) suggested by Milner, stability of the scores over a period of two-weeks and the results of the regression analysis to identify predictors of the total CAPI score.

This chapter will present the results of the assessment of the reliability and validity of the Arabic CAPI using the results of the prevalence study. Analysis for reliability was carried out using Cronbach's Alpha. Validity was assessed using principal component analysis using exploratory analysis and Varimax rotation.

6.1 Reliability Analysis

Reliability refers to the extent of cohesion between scale scores to test that results do not occur by chance or random error (Streiner, 2003). Cronbach's alpha is the most common statistical measure for assessing the internal consistency and ranges from zero to one. Based on Cohen's (1977) criteria, Cronbach's alpha is low if it is below 0.70, acceptable if the value is between 0.70 and 0.80 and good if it is above 0.80. The results of the reliability analysis for the Arabic version of the CAPI are presented in (Table 17).

Table 17. Reliability Analysis of the Arabic Version of the CAPI

Scale	Cronbach's alpha
CAPI	$\alpha = 0.911$
Abuse Scale	$\alpha = 0.905$
Lie Scale	$\alpha = 0.444$
Random Response	$\alpha = 0.318$
Distress	$\alpha = 0.915$
Rigidity	$\alpha = 0.733$
Unhappiness	$\alpha = 0.500$
Problems with Child and Self	$\alpha = 0.341$
Problems with Family	$\alpha = 0.371$

Problems from Others	$\alpha = 0.525$
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These results indicated that the Arabic version of the CAPI had good internal consistency. Cronbach's alpha coefficient was 0.91 for the CAPI, 0.905 for the Abuse Scale, 0.915 for Distress and 0.733 for the Rigidity factor scale. However, internal consistency for the validity indices and other abuse sub-scales were low.

6.2 Validity Analysis

Validity refers to the ability of an instrument to measure exactly what it is intended for (De Souza et al., 2017). In this study content and structural validity were explored.

6.2.1 Content Validity

Content validity of the Arabic CAPI was assessed through the adaptation period with a group of experts and through the pilot with the mothers (Chapter four).

6.2.2 Criterion Validity

This concept refers to the ability to compare the results of a test to a gold standard or an established criterion. Due to local limitations and difficulties in accessing a population with a history of abuse it was not possible to carry out this analysis, this will be further discussed in chapter eight.

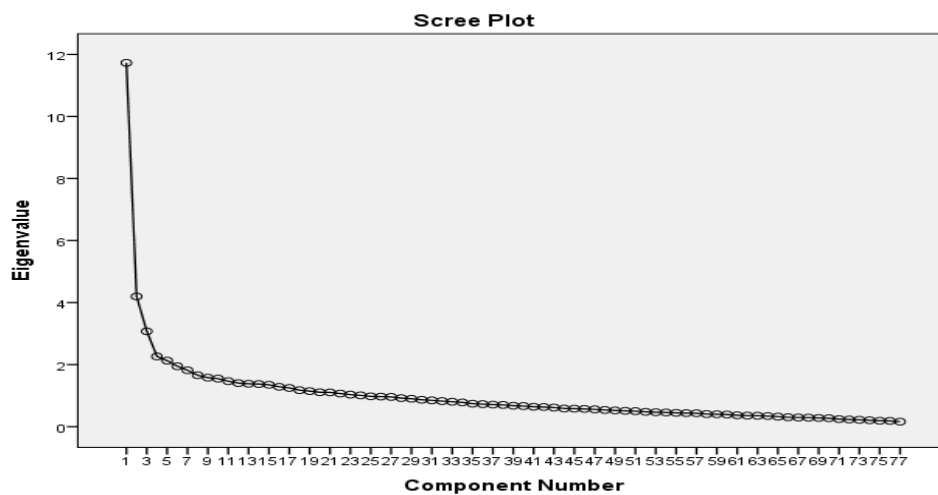
6.2.3 Structural or Factorial Validity

Data from the longitudinal study were analyzed by means of principal component analysis using Varimax Rotation to examine the factorability of the 77 items. This reflected the fact that the primary purpose was to identify and compute composite scores for the factors underlying the Arabic CAPI.

The analysis showed 24 factors with eigenvalues of more than one of which five factors had eigenvalues above two). Initial eigenvalues indicated that the first three factors cumulatively explained 15%, 20.7%, and 24.7% of the variance. The fourth, fifth and sixth factors, explained 27.6%, 30.38% and 33% of the variance. Fixing item loading at 0.3, solutions for four and five factors were examined.

A scree plot was also performed and results suggested “the elbow break point” at a four factorial structure, which explained 27% of variance (Figure 8). Fixing weight of the items to include only those above 0.3, both options were explored, looking at the total variance explained and items loading under each factor. Items loading under more than one factor were examined for multi-collinearity and two items were found to be associated together (143: ‘I often feel very alone’, and 145: ‘I often feel alone’), however the value was 0.619 which is less than 0.8, so none of the items were deleted.

Figure 8. Scree Plot of the Arabic Factorial Analysis



6.2.3.1 Five Factorial Structure

Examining item loading under the factors indicated that 44 items loaded under factor one, 15 items loaded under factor two, eight items loaded under factor three, and seven items loaded under factors four and five. Six of the items loading under the fifth factor cross-loaded with a higher weight on factor one.

The five-factor solution, which explained 33% of the variance, was initially preferred because of: (a) its previous theoretical support with other cross-cultural research; (b) the ‘leveling off’ of eigen values on the scree plot after five factors; and (c) that five factors had eigen values between 2 and 11 from the 24 factors with eigenvalues above 1. However, as the fifth factor contained only one item (Appendix 12), this model was not supported and a four-factorial structure was explored.

6.2.3.2 Four-Factorial Structure

Supported by the Scree-plot, a four-factorial structure was explored and results were compared with the original U.S. CAPI. Doing so indicated that the US Rigidity factor was divided into factors 2 &3 in the Arabic CAPI, and if the two factors were combined, then the U.S. Rigidity factor was replicated with a match of 8 out of 14 items.

Based on a conceptual analysis, comparison with the original factorial structure developed by Milner and item loading, a three factors structure was adopted; Distress, Rigidity, and Unhappiness. These three factors had a similar construct as the original US CAPI and explained 24.7% of the total variance. The Bartlett's Test of Sphericity was 0.818, above the recommended value of 0.6 and significant ($p < 0.000$). Taking this into consideration, this research proposes a three-factorial structure, made up of Distress, Rigidity and Unhappiness as per the following table (18).

Table 18. Factorial Structure Suggested For the Arabic CAPI

	Item	Factor Loading
	Factor 1: Distress	
1.	Item 5: I am a confused person	0.345
2.	Item 9: I am often mixed up	0.504
3.	Item 17. I am often angry inside	0.416
4.	Item 18. Sometimes I feel all alone in the world	0.507
5.	Item 22. I often feel rejected	0.334
6.	Item 23. I am often lonely inside	0.582
7.	Item 25. I often feel very frustrated	0.463
8.	Item 28. Sometimes I fear I lose control over myself	0.304
9.	Item 36. I sometimes worry that I will not have enough to eat	0.470
10.	Item 38. I am an unlucky person	0.435
11.	Item 41. Things have usually gone against me in life	0.469
12.	Item 47. I sometimes feel worthless	0.486
13.	Item 49. I am sometimes very sad	0.466
14.	Item 52. I often feel worried	0.582
15.	Item 56. I am often easily upset	0.465
16.	Item 63. I am often worried inside	0.597
17.	Item 67. People have caused me a lot of pain	0.481
18.	Item 69. I have a child who gets into trouble a lot	0.315
19.	Item 73. I find it hard to relax	0.430
20.	Item 74. These days a person doesn't really know on	0.399

	whom one can count	
21.	Item 78. Other people do not understand how I feel	0.515
22.	Item 93. I have fears no one knows about	0.447
23.	Item 95. Life often seems useless to me	0.507
24.	Item 98. People do not understand me	0.598
25.	Item 99. I often feel worthless	0.500
26.	Item 100. Other people have made my life unhappy	0.459
27.	Item 102. Sometimes I do not know why I act as I do	0.368
28.	Item 103. I have many personal problems	0.542
29.	Item 105. I often feel very upset	0.608
30.	Item 109. I am easily upset by my problems	0.526
31.	Item 111. My parents did not understand me	0.364
32.	Item 112. Many things in life make me angry	0.536
33.	Item 118. I am often depressed	0.483
34.	Item 120. I am often upset	0.646
35.	Item 138. I am often upset and do not know why	0.572
36.	Item 141. I have a good sex life	0.431
37.	Item 143. I often feel very alone	0.514
38.	Item 145. I often feel alone	0.627
39.	Item 148. My family has many problems	0.357
40.	Item 151. Other people have made my life hard	0.527
41.	Item 153. I sometimes worry that my needs will not be met	0.432
42.	Item 154. I often feel afraid	0.432
	Factor 2: Rigidity	
1.	Item 19. Everything in a home should always be in its place	0.390
2.	Item 26. Children should never disobey	0.423
3.	Item 68. Children should stay clean	0.494
4.	Item 76. I have a physical handicap	0.321
5.	Item 77. Children should have play clothes and good clothes	0.459
6.	Item 80. Children should be quiet and listen	0.458
7.	Item 107. My life is good	0.448
8.	Item 115. Children should be seen and not heard	0.322
9.	Item 122. A good child keeps his toys and clothes neat and orderly	0.430
10.	Item 127. Children should always be neat	0.486
11.	Item 130. Children should never cause trouble	0.394
12.	Item 147. Right now I am deeply in love	0.514
	Factor 3: Unhappiness	
1.	Item 7. People expect too much from me	0.364
2.	Item 14. I am a happy person	0.353
3.	Item 75. My life is happy	0.438
4.	Item 81. I have several close friends in my neighborhood	0.306
5.	Item 141. I have a good sex life	0.328
6.	Item 147. Right now, I am deeply in love	0.341

6.3 Summary

This part of the chapter presented the results of the reliability and validity test of the Arabic CAPI. The reliability analysis indicated good reliability for the Abuse Scale as measured by the Cronbach's alpha particularly for factors of distress and rigidity.

The factor analysis yielded a three-factor solution composed of Distress, Rigidity and Unhappiness. Items under Distress included 35 items from the US Distress factor in addition to seven items from other factors. Rigidity included eight items from the US Rigidity factor in addition to an extra three from the Unhappiness factor. Unhappiness includes 6 original items and one extra that originally belonged to Rigidity.

Table (18) shows the result of the principle component analysis and comparison with the original six factors suggested by Milner, which revealed the reproduction of Rigidity, Distress and Unhappiness but with a slightly different item composition, the other two factors had a combination of items from Distress, Rigidity and Unhappiness.

Items from factors related to having problems with others, self and child did not load heavily under any of the factors in the Omani population.

The findings of this research are consistent with the results of Milner and Crouch (2012) which identified the stability of the first three factors (Distress, Rigidity, Unhappiness) but instability in the three interpersonal factors ((Milner and Crouch, 2012) in translated versions of the CAPI.

6.4 Summary OF Chapter Six

Internal consistency reliability for the CAPI was high for the Abuse Scale and two factor scales; Distress and Rigidity as measured by Cronbach's $\alpha =$ (0.905, 0.915 and 0.733), this indicates that the Arabic CAPI has good reliability assessment. Similarly test-retest reliability was high (Pearson's $r =$ 0.89).

Regarding construct validity the six-factor scale of the CAPI was not replicated and only three factors were obtained; Distress, Rigidity and

Unhappiness). This was similar to findings from Japan (Kawamura et al, 2009). Mean score values of these two scales were also much higher than the American ones as the mean was 90 (SD=58) for Distress and 40 (SD=15.6) for Rigidity, comparing to 58 (SD=56.8) and 10 (12.5) for the American factors.

Although the CAPI is widely researched in English and in different languages, it has not been tested previously in an Arabic language. This research aimed at assessing its findings in terms of scores above the cut-off value, its reliability, stability and validity.

Findings of this research are different from the original US CAPI, but are in keeping with other translated versions. However, it is not clear whether differences noted are because of differences in characteristics between populations, parenting styles, definitions of abuse, or because of lack of understanding of the CAPI items.

In other words, are the two populations are different, or was the CAPI poorly understood? The next chapter examines this question through qualitative research experiences and perceptions of mothers with the CAPI.

Chapter Seven

Qualitative Research (Method and Results)

7.1 Introduction

This chapter investigates the views of Omani mothers taking part in the qualitative study, and explores their views about the CAPI. In addition, it reports the views of key professionals on the CAPI, and the readiness of Oman to initiate screening for child abuse as part of the child protection system. The second arm of this research is important for future practice. It gives a holistic view of the attitudes towards using the CAPI in Oman. In addition, the opinions of the participating professionals at this stage are relatively unbiased as they have not been involved in the research nor has the CAPI been validated and implemented locally.

This research was carried out as part of assessing the construct validity of the CAPI using triangulation. Triangulation in clinical research is used when more than one method, data source, theory or investigator is used to study a single phenomenon (Denzin 1989 cited in Shih 1998). The use of triangulation has different purposes, including confirmation of findings and completeness or holism in studying a certain phenomenon (Shih, 1998). In this research it has been used as a method to validate the cultural appropriateness of the Arabic CAPI to the local Omani context and religious beliefs, and to obtain a better understanding of perceptions of the mothers about the CAPI as a tool and their involvement in the research.

7.2 Methods

A general description of the methods, aims and objectives of this part of the research were provided in the methodology chapter. However, this section illustrates the detailed procedures carried out in order to collect, transcribe and analyze the data, including obtaining ethical clearance for this part of the research, sampling procedures, development of interview guides, interview processes and the analysis of the data.

A number of key approaches to qualitative research have been described by researchers on matters of ontology and epistemology as well as research

traditions (Patton, 2002). Creswell and colleagues (2017) described five research traditions: narrative; phenomenology; grounded theory; ethnography; and case study. They emphasized the importance of adhering to specific methodologies when conducting qualitative research, from the point of data collection to writing up the results (Bradbury- Jones et al., 2017). However, other researches argue that using different approaches in qualitative research is actually beneficial as it provides a rich pool and options for researches to use and explore different aspects of a research (Greenhalgh et al., 2016 cited from Bradbury Jones et al., 2017). For this research, elements from more than one approach seemed to fit this research, and a more generic approach was adopted.

In spite of this, certain elements of different approaches did fit this research. For example some aspects of phenomenology were drawn on to explore the meanings of experiences to individuals, including emotions, relationships or culture (Creswell, 2017). This study aimed at understanding experiences of Arab, Muslim mothers in completing the CAPI and explored the emotions of mothers while completing it.

Another aspect was ethnography, which aims to explore the effect of culture on an individual's experience (Creswell, 2017). Although the CAPI has been used in several languages and cultures, none of the studies aimed at understanding the effect of culture on the scores. In other words, are there specific aspects to a culture related to high scores, differences in parenting experiences, use of corporal punishment or inappropriateness of the tool to the culture. In exploring some of these aspects in the qualitative interviews, I was able to draw on some of the approaches of ethnography.

7.3 Ethical Approval

Following completion of the quantitative part of the research and further development of the research documents, ethical clearance was obtained from both the University of Warwick Biomedical Sciences Research Ethics Committee (BSREC) and the Research Ethics Committee at the Ministry of Health in Oman. Following approval, documents were translated to Arabic and reviewed by the local supervisor to validate the translation, and then

submitted to the Omani Ministry of Health (MoH) Research Ethics Committee.

A number of ethical considerations were anticipated for this part of the research. Such matters were discussed with my supervisors at Warwick and a protocol was put forth within the current child protection system in Oman (Appendix 14). Those included matters such as a mother getting distressed due to the sensitive nature of the topic, or even disclose confidential information about child abuse during the interview.

However, in developing this protocol, it was recognised that the current system for dealing with possible child abuse in Oman is weak and offers minimal support to children and their families. Counselling services at Primary Health Care are available and counsellors are trained on providing counselling services for certain programmes such as birth spacing or control of diabetes. It was decided that if a participant got emotional during the interview then the researcher would try her best to comfort her, if more support was needed then she would be referred to the counsellor at the primary health care facility. Another scenario anticipated was if a mother disclosed an on-going abuse to a child, in such case the matter will be raised to the National Child Protection Team in Oman.

7.4 Research procedure

7.4.1 Semi-Structured Interviews

A number of methods can be used to collect data as part of qualitative research; these include focus group discussion, interviews (structured, semi-structured and guided), observations and analysis of documents (Griffith, 2009). In this research, semi-structured interviews were the method of choice. Focus group discussion was considered initially, but was later eliminated due the possible diversity of opinions and shyness of Arab women in terms of speaking publically.

For this study, an interview guide was developed after discussion with the research supervisor and involving the following steps:

1. In view of the research objectives and previous experiences, brainstorming meetings were held with the supervisors at Warwick to decide on the main concepts to be explored using the interview.
2. Open-ended questions were developed and put in sequence starting with the most general, broadest questions.
3. Prompts were agreed upon when appropriate to ensure the smoothness of the interview and to go deeper into the interview responses.
4. Revision of the guide was then undertaken to ensure that all questions were culturally sensitive and appropriate to ask.

7.4.2 The Interview Guide for Mothers

1. Women's general opinion about the CAPI
 - Ease of understanding, clarity of the language
 - Appropriateness to religion and local culture.
 - Suitability for Oman
2. Women's opinion on the practicality of using the CAPI in Oman
 - Setting (where and when)
3. Women's opinions about involvement in the research.

7.4.3 Interview Questions for Mothers

(Appendix 15)

7.4.4 Interview Guide for Professionals

1. Screening for child abuse and neglect and readiness of Oman to initiate it
2. General opinion about the CAPI
3. Reflections

7.4.5 Interview Questions for Professionals

(Appendix 16)

7.4.6 Research Documents

For this study two sets of information leaflets were developed; one for mothers and a different one for professionals in addition to invitation letters and consent forms.

7.4.7 Research Samples and Procedures

A number of sampling techniques exist for qualitative research, these include theoretical sampling, convenience sampling, typical sampling, creative case sampling and maximum variation sampling (Hancock et al., 2007). Deciding on a suitable sample size in qualitative research is not determined by fixed rules such as statistical representation or other methods used in quantitative research. It depends, however, on the aim of the study, depth of the interviews, resources available and number of interviews feasible for a single interviewer to carry out. Furthermore, data collection in qualitative research is more expensive and time consuming than quantitative research (Britten, 1995).

The main objective for this qualitative research was to explore in depth experiences of mothers in answering the CAPI and exploring their views on its cultural suitability to Oman. Therefore, it was decided to interview the mothers until theoretical data saturation was reached in regards to the main objectives of this research. That is to say when no new ideas emerged from the informants. The findings from the interviews were regularly reviewed with my supervisor, with the aim that once several interviews had been conducted with no emerging themes, saturation would be assumed.

To ensure that opinions of mothers were included, a maximum variation sampling was used to ensure that they were representative of all scores and that multiple perspectives and opinions about the CAPI were obtained. This list was selected by my supervisor at Warwick, so that the researcher remained non-judgmental to mothers during the interview.

Professionals were selected according to the objectives of this study. The sample included both male and female Omani decision-makers and front-line officers involved in the child protection system in Oman (social workers, doctors and nurses). The sample consisted of nine professionals, one senior decision maker (MOSD), one decision maker (Child Protection Home), one social worker (Child Protection Home), one social worker (Child Protection Team), one senior social worker (Child Protection Committee), one decision maker (Child Health), one senior pediatrician (National Child Protection Committee), one junior pediatrician from the hospital, one pediatrics accident and emergency nurse.

7.5 Interview Procedure

Mothers were first contacted by telephone; the call started by thanking them for participating in the research and explaining the requirements of this phase. If they agreed to take part, a time and a place were agreed, and a meeting took place.

Decision-makers were contacted through an official letter including information about the research and research documents (e.g. Arabic CAPI). This was followed with a telephone call and if they accepted, we arranged a meeting. Decision makers were requested to nominate front-line officers to participate in the research.

To ensure the smoothness of the process, the researcher always arrived ahead of time, keeping two charged recorders, and carried extra copies of the information leaflets and the CAPI.

Interviews began with a preamble that included greeting the informant, discussing the research and the objectives of this interview, thanking the participant for their time, setting parameters for the interview (length and audio recording), and assuring confidentiality. Informants were reminded that they had the right to withdraw at any point during the research, and occasionally the interview was ended if the informants seemed distressed due to another commitment or a crying newborn.

Participants were also assured that the interview was not to discuss their scores on the CAPI, and that the researcher actually did not know what their scores were. They were assured that there were no judgments made, based on their scores or their opinions on the tool and that there were no right or wrong answers. They were reassured that the purpose of the interview was to explore their thoughts, ideas and experiences in the research and with the CAPI.

Interviews with the mothers lasted for about twenty to thirty minutes and with the professionals thirty to forty minutes. All interviews were in Arabic language, except for two interviews; one with a doctor and one with a nurse, which were a mix of Arabic and English.

7.6 Difficulties in Accessing and Recruiting Participants

Several challenges were faced recruiting participants for this research. For mothers, the main challenge was that pregnant mothers from the previous phase were now post-natal mothers. In the Omani culture, a post-natal mother cannot leave her house during the first forty days after delivery. And usually during these forty days, guests visit the mother unannounced to congratulate her on the newborn, and so it is very difficult to fix a time for the interview even at home. Another challenge was that although many mothers resided in Muscat they actually originated from the regions, and had gone back to their original “parent home” after the delivery for three months. Also some mothers were unreachable on the phone numbers provided.

Difficulties with professionals revolved mainly around finding a suitable time and place for conducting the interviews, as many were busy with their meetings, work commitments and clinics. Some professionals agreed to participate but required approval from their manager. In such cases, I arranged an appointment with the person in-charge, explained to them the research and requested their support if they had no objection.

7.7 Data Collection and Analysis

7.7.1 Digital Recording

All interviews were digitally recorded on two different recorders in case one of the recorders failed during the interview. Note records were also made to register non-verbal communications, responses and reactions of the informant that are not elicited by audio recording.

Digital recording allowed subsequent re-visiting and analysis as well as allowing the researcher to concentrate on the informant during the interview process without being distracted taking notes. However, it also has its disadvantages as it may interfere with the openness and true integrity of the interview, or make the informant uncomfortable during the interview. In some of the interviews, this was sensed particularly at the start of the process and participants took some time till they fully engaged in the interview and became oblivious to the recorder. Another disadvantage to recording is that it is time consuming and costly to transcribe.

7.7.2 Transcription and Translation

All the interviews were transcribed and typed in Arabic by a professional company. At the start the process was initiated by the researcher, but this proved to be lengthy and unmanageable. Hence a decision was made to seek a company to carry out the task. However, the researcher also carried out transcription of the interviews directly into English, to allow immersion with the data fully. Each interview took about six to eight hours, depending on the length of the interview. Translation was the most strenuous part of the process. As a native Arabic speaker, the researcher had no difficulty communicating with participants. However, with certain Arabic words when literally translated into English, the true meaning of the sentence is altered. That is because they are local clichés that carry local cultural meanings. To solve this problem, the researcher discussed with the local supervisor how to best preserve the true meaning of the words while translating them into English. For example, the word “aadi” translates literally to normal, while colloquially it means that something is good, or there is no objection to it. In

such cases, when a single word was not found the word in Arabic was written with its meaning in English.

7.8 Methods of Analysis

Thematic analysis was conducted at two overlapping levels. The first level related to the aims and objectives of this research as per the interview guide (Patton, 2002, Fereday and Cochrane, 2006). The second level emerged from the information and experiences of the informants. Both levels followed these stages (Pope et al., 2000):

- Familiarization: to immerse with data recordings were listened to repeatedly and transcripts were read thoroughly several times; sentences were divided into segments, and striking words or words and ideas that were repeated, were coded. General conditions of the mothers and non-verbal communication were noted when thought were important. For example: one of the mothers was particularly apprehensive of being interviewed and asked her neighbour to be present during the process. In another two interviews, mothers cried and the recording was paused, but the researcher noted that the mother cried. Laughs and stress were all noted when relevant.
- Indexing: whereby all key issues, codes and themes were noted. Themes emerging from the interview guide were marked at the left margin of the page. These were assigned as general themes, while new recurring ideas from codes or units of data were treated as sub-themes.
- New themes emerging from participants' other experiences or ideas that were not based on the interview guide were marked on the right side of the page and were marked as new themes.
- Charting: data were copy-pasted in a table according to the appropriate thematic framework with quotations to support the idea.
- Mapping and interpretation: this was the final stage of formalizing the themes and was used to extract concepts and find associations between themes. This process was guided by the original objectives of this research, as well as new emerging data.

- Peer review meetings were carried out for two interviews with the local supervisor to compare the findings. Both meetings supported the results of the analysis and there was a good level of agreement between the two researchers.
- Results were later discussed with the supervisor at Warwick and the general themes based on the interview guide were: practicalities of using the CAPI, where and when the CAPI should be used, shifting culture, and implications for parenting.
- New emerging themes were as follows: local attitudes towards parenting programmes, and the use of corporal punishment among Omani parents.

7.9 Memo writing

During the processes of transcription and coding, a memo was initiated to record thoughts, ideas and assumptions arising from engaging with the interviews. The writing was much like free writing, and was used to help consolidate ideas. These memos proved to be very helpful as they enabled a linking of ideas arising from different interviews in the early stages, and then later formed the foundation for writing the results of the research.

The memo also included a table of different codes, themes, explanations and quotations from each interview. This table helped in “constant comparison” (Pope et al, 2000 BMJ), and to understand how a particular idea was either shared or differed among participants.

The results will be presented as two separate domains: mothers and professionals. This is because the aims for each were different. Conclusions will, however, be drawn from combining the two domains in a later chapter.

7.10 The Role of the Researcher

The effect of the researcher is an important element to consider when carrying out qualitative research. In this research I often felt that I had to separate three different roles: developer of the Arabic CAPI; interviewer; and professional/colleague. These different roles brought both strengths and weaknesses. On the one hand, being heavily involved with the process of

developing the CAPI aided in interpreting the informants' views and opinions on the CAPI, particularly as I had similar concerns at the initial phases of development. On the other hand, I was aware that this may make me defensive of the CAPI and limit my ability to recognize new themes or ideas. To overcome such issues, three of the interviews were peer reviewed and discussed with the supervisors at Warwick and the local supervisor.

I was also concerned that being a colleague to some of the professionals may affect their ability for transparency and objectivity. Nevertheless, I stated at the beginning of each interview that informants were free to state their opinion, and that this is research to actually explore whether the Arabic CAPI would fit an Omani Arabic Muslim culture.

I also felt that being an Omani female helped in establishing rapport with the mothers, which positively influenced the interviews. For example, some mothers reflected during the interviews on their own experiences with corporal punishment as children and mothers. This is a sensitive topic and it is not easy to discuss for many. I also felt that my previous clinical experience in interviewing patients had aided me in conducting the interviews.

7.11 Interviews with the Mothers

- Introduction

Ten Omani mothers were interviewed; their ages ranged 24 to 37. Six of the mothers have completed education up to high school, one completed university and the other three were of higher education level. Only three of the mothers were working, one was a doctor and the other two were teachers. Majority of the mothers had children already and two were primi. Results of this research are presented as original themes and emergent themes. Original themes were based on the topics in the interview guide and include perceptions of ten Omani mothers on the CAPI, practicalities of using the CAPI in Oman and shifting cultures and implications for parenting. New emergent themes that arose from the data include the use of corporal punishment in Oman. Sub-themes will be discussed under each major theme, although there is a degree of overlap between themes. The

discussion of the results will involve a combination of description and interpretation of findings.

- **Perceptions of Omani mothers on the CAPI**

- **General Opinion**

The CAPI as a tool was widely accepted by mothers in Oman, and no participants rejected the tool or thought it was inappropriate. This is an important finding as it indicates the cultural suitability and appropriateness of the CAPI to an Arabic Muslim Culture in Oman. Mothers used different terms to support this opinion. "Aaadi" was the commonest used word by mothers in reflecting upon their feelings towards the CAPI. Mothers also used words such as "good", "focus on protection", "parent-child interaction" and other positive terms that will be discussed in details below.

- **Realistic** - Mothers also felt that questions of the CAPI were realistic and reflected on situations that arise from daily interactions.

“ The questions are from things that happen in reality, there are things that actually happen between people, particularly between a mother and her child”
(Mother-1)

- **Easy To Understand** - Mothers thought the language used was simple and straight-forward. However, they also thought that answering some of the items required thinking and reflecting, as the answers were not scaled, and that to answer with either "agree or disagree" necessitates a true understanding of an individual's attitude towards a situation.

"I thought some were spontaneous and you can answer straight away but some you needed to pause and think of what you would answer "(Mother- 2).

- **Reflection** - Mothers said that the items made them reflect on their interactions with the children, not only on a day-to-day basis but to predict if situations were to happen, and the appropriateness of their behaviour. They explained that while completing the CAPI they recalled previous scenarios and reflected on their actions. One mother expressed that answering the CAPI will make her think twice before she uses corporal punishment with her child.

“It is like reading the Quran and we occasionally stray away from doing the right thing, we read the Quran and it reminds us, this is the same in regards to violence, it’s a reminder not to!” (Mother-3)

"They made me think more of such issues and care more about my children, (pause) I have always been concerned and I have always cared about my children, but when I saw the items, it made me care more about their feelings and talk to them about what has happened in their day“(Mother-2).

The items also made them think about the impact of different life stresses and situations, conflicts with family members and how that could impact on their relationship with their children.

"Of course, because at the end a human gets affected with situations and factors surrounding him, so even if a person does not suffer from mental health issues, or any particular problems, factors around him can make him depressed or frustrated, and that in turn can affect how you look after the child you are responsible for" (Mother-4)

- **Informative** - a few mothers described the CAPI as a source of information, and this was not something the researcher expected to hear, as the CAPI is a screening tool with questions not information. On exploring further how they felt it was informative, their answers revealed the possibility of re-affirmation of certain doubts they had internally but were not able to vocalize because of fear of societal judgment. Such as " boys playing girls’ games", "bed wetting at five years of age".

““ a boy playing with girls toys is sissy”, it’s true sometimes some boys like to play with girls’ toys, there is nothing wrong with that, this as information there is nothing wrong with that, but for some people it is not acceptable and they might yell at their boys for playing girls’ games" (Mother-3).

- **Appropriate To Local Culture And Religion** - mothers did not seem to think that items of the CAPI were offensive to local culture or religion. Although some mothers expressed their reservation about one item specifically (I enjoy a good sex life), in general they thought the language was appropriate and the tool was suitable particularly to items relating to using physical force against a child and cleanliness of children.

"To be honest I didn’t even think that it was translated" (Mother-5).

"There are things related to our religion and culture such as not fighting in front of children, teaching them good habits, and also Islam tells us to be clean, and there were few items on being clean and wear clean clothes, so I felt it was related to Islam" (Mother-2).

- **Specific Items Of The CAPI** - Opinions about specific items have been diverse; some of the terms extracted from the interviews were: *clear, simple, spontaneous but reflective, diverse, deceptive, easy and friendly at first but gets tougher later, forced choice, superficial, repetitive, no ambiguity*. While some mothers have accepted or rejected certain items, others had no objection to any of them. Hence there was no consensus on deleting any specific item. This finding was consistent with the views of participants during the adaptation period of the research, and indicates the diversity of the population in Muscat.

Initially, I had doubts about certain items and explored these doubts with supervisors at Warwick, Oman and Milner, and it was decided not to delete any item and explore them further while adapting the tool. The item that was flagged by the mothers was "*I enjoy a good sex life*". However, while some mothers expressed a feeling of embarrassment while answering this question, others felt it is appropriate as mothers might express anger towards children if they were sexually frustrated. Others thought that it is fine to ask such questions within a health context, and some felt that it was acceptable to discuss the topic provided the tool was handled by women only and no men were involved in the process at any point.

" I enjoy a good sex life"., I felt why are they asking us such a sensitive question, however I answered it, as this is a health facility and I trust them, and I trust that the information I provide will not be used in a wrong way (Mother-6).

- **Negative Perceptions About The CAPI** - although none of mothers rejected the CAPI, some thought that the tool was too long, superficial and does not cover other types of abuse such as sexual abuse, and that items were repeated. They also thought that the CAPI takes a long time to complete and were worried that discussing the tool may consume time allocated for their clinical examination with the doctor.

"Physically beating a child is a simple thing, you didn't go deep in the questions, most of the questions are superficial" (Mother-7).

- **Practicalities of Using the CAPI in Oman**

While all the mothers welcomed the idea of having the CAPI as a tool that is used in primary health care, and thought that child protection is an important element of child health, their views were diverse in regards to where it should be administered and who it should be used with.

- **Where?** Some mothers thought the ante-natal clinic was the most suitable clinic, as there are multiple visits during pregnancy and they viewed the pregnancy period as an opportunity for mothers to reflect on their parenting strategy and modify certain behaviours before the child is actually born.

"I always feel that the earlier a mother is alerted to the consequences of her actions on the child the better it is, so I think the ANC Clinic is the best place, so that she has more awareness and also time to prepare herself mentally and emotionally and educate herself and open up her mind to such matters" (Mother-3).

Other mothers thought the general clinic would be better as it would capture more parents; one mother suggested the child health clinic as she thought that pregnancy itself is an emotional period for a mother.

"At the Child Health Clinic because their emotional status is different, pregnant women are generally emotional, and anything can affect her. But after child birth you are much calmer" (Mother-8).

Two of the mothers thought the CAPI should be implemented at school for screening of mothers and teachers. One of them strongly felt that some educators express their frustration on children and that professionals working in the education system should be screened

"Sometimes some teachers are under emotional stress, so she takes it out on the student" (Mother-7).

- **Involvement Of Fathers** - some mothers valued the role of fathers with children and stressed the importance of involving them to either educate or sensitize them. However, other mothers felt that involving fathers

would not make a difference because of their lack of interest in the CAPI and involvement with children

“I don’t think it can be filled by fathers, they probably don’t have the mood for it. Many men feel their role is to work, earn and that’s all. But raising children is the mother's job. Don’t you agree?” (Mother-1).

- **Time For Completing The CAPI** - Different opinions were expressed by the mothers regarding the time it took them to complete the tool. While some mothers thought it was appropriate “Overall it took me about 10 minutes to fill the tool, because I had to think about some of the questions, but otherwise, it was quick “(Mother-4); others thought it was long “The tool is long and needs a long time, because it needs focus and concentration “(Mother-2). These differences could be attributed to variations in educational levels among participants.
- **Emotions Of Mothers While Completing The CAPI** - a range of emotions were expressed by mothers; "*aadi, calm, curious, apprehensive, worried*" while completing the CAPI

“I felt why am I being asked these questions, but then I thought its ok let me answer and maybe it’s for a good cause” (Mother-7).

- **Shifting Culture and Implications for Parenting**
- **Internal Conflict** - during the interviews mothers expressed that answering the CAPI had made them reflect on their own parenting strategies, interaction with children and a had resulted in a process of self-assessment. They confessed to feelings of conflict between reality, and the fact that occasionally they do use corporal punishment and what they felt ideal parenting should involve in terms of modern parenting strategies. They justified their behaviours in terms of a number of factors: previous history of corporal punishment; stresses of daily life; conflicts with family members, children and spouse; and lack of proper education about modern parenting techniques.

"Many mothers don’t know how to deal with their children, whatever the child does, they get frustrated and must beat their child, they don’t try and be compassionate, understand "(Mother-8).

I felt that this was an important issue, as the tool is intended for screening for child physical abuse, but these findings suggest that in Oman it was viewed in ways that go beyond that which it was intended for. This may be related to the current societal movement in Oman: increased educational levels of the population; socio-economic transition; and awareness on child abuse and neglect, which currently is at an institutional level (health care, social development and education). This shift in culture is positive as today's parents are at ashamed about using violence against children, unlike parents from older generations who proudly tell stories of hitting their children and what sticks were used for such occasions.

“yes, absolutely, one may make humor of it and remember an incident as “ I did this as a child and got some whooping” and the other may say my mom was cruel to me and used to beat me all the time, though it may not be the situation, but that's the memory that he remembers from his childhood experience” (Mother-9).

- **Parenting**

Mothers expressed views about the effects of negative parental attitudes on the child; they discussed particularly feelings of anger, stress, and lack of proper communication with the child. They suggested that parenting is a process that goes beyond fulfilling the basic needs of a child, and is rather a holistic process of knowing, listening and interacting with your child.

“but there are two different things, there is fulfilling basic needs of a child and there is parenting a child, which we miss a great deal, and there is a lot we don't know about how to communicate and deal with our children.” (Mother-10)

- **Involvement in Parenting Programmes**

There appeared to be a thirst for learning parenting strategies and an eagerness on the part of the mothers to learn. Mothers in this sample seemed to be aware of the fact that they cannot and should not use parenting methods that rely on emotional abuse, threat, and corporal punishment. Even mothers who reported using it, revealed a sense of guilt afterwards and fear of emotional damage to the child. Mothers also appeared to realize the

importance of parent-child interaction and proper communication and to be in continuous search for information on-line or through involvement in paid workshops

“last week I attended a WhatsApp group on how to play with children, and my husband was supportive, he kept the children busy while I attended the group for 3 hours” (Mother-1).

However, some mothers expressed a feeling of apprehension about and rejection of the idea of forceful involvement of professionals if their CAPI scores were high and being possibly labeled as a “not so good” mother, but revealed that they would eventually accept it, if it was for the safety of their child.

“Of course I will be shocked at first, as how my result could be high cos I think of myself as a considerate mother but then later I will accept” (Mother-1).

- **New Emergent Themes**
- **The Use of Corporal Punishment**

Corporal punishment is still the norm among most mothers interviewed: “Some people think that beating is a way of life, I was raised like that so I will bring up my child like that” (KH-41). The interviews showed that while educated Omani mothers today know the negative implications of such practices, they are not all are able to stop it due to many factors: being beaten as children; being excessively stressed; not having alternative methods of discipline; being unable to control their anger.

“Many mothers don’t know how to deal with their children, whatever the child does, they get frustrated and must beat their child, they don’t try and be compassionate, understand” (Mother-8).

“They will all say that like we were beaten and we learnt we should hit them so they would learn” (Mother-1).

Some mothers linked the use of corporal punishment to adverse ill health today, particularly mental health, disorders such as autism, and poor social interactions amongst children.

“Our children today are suffering from different emotional problems, because of us, we as parents did not know how to deal with our children properly. So our children are our victims” (Mother-3).

Mothers also expressed the danger of “dose related” corporal punishment and the need to sometimes use sticks and belts as a “smack on the hand or back” is not enough to achieve the desired outcome. A mother confessed that once she had burned her 3 year old son with a match for cursing and using bad language; she described this incident as a "*wake-up call and turning point*" to completely stop using violence with her children.

Another dilemma was the use of corporal punishment as “a heritage in Arabic culture” and although many mothers today do not believe in it as an only way to parent a child, almost all mothers admit to having to use it or threaten with it at some point.

While many mothers admitted that the main reason for hitting a child was because they were hit themselves as children, a few of them stood strongly against it, and refused to use it as a method of discipline with their children. The mothers who could achieve this goal had either not been subjected to it in the past or have educated themselves through reading or attending parenting classes.

"We know that long time back parents used to beat up their children, like my husband still says their father had different kinds of sticks, fortunately I didn't have that at home, but right now the maximum acceptable is a time out/, more than that is really not accepted for us" (Mother-4).

The use of corporal punishment was not among the main themes of this research, however as few mothers expressed their views on the matter, an attempt was made to investigate a link between mother's opinions and CAPI scores. Interestingly two mothers who, at interview, supported the use of corporal punishment, had scored low on the CAPI (122 and 82), but their scores on the Lie Scale were high (10, 10). One mother who spoke against the use of corporal punishment and supported modern parenting practices scored low on the CAPI and the Lie Scale (128 and 5).

7.12 Score Analysis

Results from the quantitative study suggested that using the Milner's cut-off value of 215 would classify one-quarter of the Omani population as potential abusive. In view of that, scores were classified as low (Less than 215), medium (215-303) and high (more than 303) and the views of mothers in each of these three groups were analyzed in an attempt to establish a link between mothers views towards corporal punishment -as expressed in the interviews- and CAPI scores.

• Mothers with Low Scores

Six mothers had scores below the 215 Milner cut-off value, and discussion with three of them indicated that they did not believe in the use of corporal punishment and were the type of parents who are involved with their children and cared about their emotional and physical needs and highlighted the importance of proper communication with the child.

“That there are people out there who really care about the child’s feelings, I felt a sense of relief that someone actually cares about a child’s feeling in particular. It’s a subject often neglected, we do take them out but we don’t really care how they feel, or communicate with them and have a real dialogue” (Mother-2)

Two mothers although scoring low indicated that they have used corporal punishment. These mothers both had elevated Lie Scale scores. However, the Lie Scale scores were overall high in this research.

“but for me because I read the whole tool before answering I knew the tool was deceiving to a degree and the same question is repeatedly asked but in a slightly different format. And it gives the same answer, but if you have not read it all before, you wouldn’t have known (laughs)!” (Mother-7)

“A stick I would use but not other instruments, with my hands I do with a stick sometimes, but other instruments I wont, I feel it is brutal.” (Mother-7)

• Mothers with Medium Scores

Three mothers scored between 215 and 303, of them one did not indicate her direct opinion but described the CAPI as a tool that is realistic and picks

on real parent-child interactions and the effect of stress on a mothers behaviour

“her day to day life, how she deals with her children on daily basis, how she reacts when she is angry or stressed, how she reacts when her child is mischief or naughty” (Mother-10)

Another mother confessed to resorting to physical punishment, though she knows that it is wrong.

“yes, Subhan Allah, the beating of children, sometimes you are angry and your first response is to beat your child , but we should not beat them first, that should not be our first response, because we may bruise them and hurt them” (Mother-8)

The third mother did not approve of beating a child. In response to the statement beating that only causes bruises is acceptable, she responded:

“Why only causing bruises, you can still harm a child by beating him without causing bruises.” (Mother-6)

• **Mothers with High Scores**

One mother scored above the cut-off score of 303, and she expressed views against the use of corporal punishment and highlighted the importance of mother-child interaction. This mother was a wife of a fisherman with basic education and low income level, she lived in a small house by the beach. During the interview she was very warm and welcoming and had requested a neighbour to come look after her newborn so that she can participate in the interview.

“Any mother should not accept, and as a mother I should not accept beating that causes bruises only as a method of discipline and mark his body! This matter does not fit with us!” (Mother-10)

In summary this qualitative analysis did not indicate a direct relationship between scores and views of mothers on corporal punishment and CAPI scores. It however suggested that mothers with low scores tend to shed away from using physical corporal punishment and are welcoming to the idea of receiving training or advice related to parenting. They are supporters of good parenting practices and enhancing parent-child communication.

However, findings are limited due to the fact that this research aimed at exploring their views on the CAPI and did not focus in depth on investigating views of mothers on corporal punishment. Another factor, is the low number of participants scoring above the cut-off value of 303 and wide use of mild to moderate corporal punishment in Oman and that it is not perceived as a form of abuse locally.

7.13 Findings from Professional Interviews

Interviews with nine professionals commenced by investigating their views about screening in general, then moved on to specific details related to this research such as their views about screening for child abuse and neglect, and the use of the CAPI.

- **Screening In General**

All professionals considered that screening is a robust and informative method that adds value to an intervention or programme. However, methods of screening differed between professionals from health and social services. Health professionals identified screening as a direct method of identifying people with health risks such as anaemia or cardiac conditions through the use of scientific tests, while professionals from social services said that screening is an indirect method by which social workers can investigate issues in society from questions arising about interactions with the community, for example, at awareness and education workshops. One professional from social services regarded screening as being a purely health method and that screening is used in social services for research purposes only.

"Not widely used in social sciences, an equivalent to the concept is spreading awareness. We find out about issues through questions raised in campaigns"
(Professional-1)

- **Challenges to Screening**

Informants identified a number of challenges to screening. The main challenge identified was the acceptance of the community, many also thought that screening is resource intensive (time, manpower and financial)

and that such resources are not always available. A few also added that the geography of Oman with pockets of people residing in mountainous areas and deserts make it difficult to screen the population as a whole. One participant thought that screening is useful for research purposes only.

"acceptance of the community to such research, particularly social science, education level of the community , so the higher the education level of the community the better the acceptance, having time , as if you want to carry out this kind of research, the researcher should have the time and of course the money factor as such research is costly" (Professional-6)

"Screening is good for research purpose" (Professional-2)

One participant who was a physician and has used a tool for screening for autism mentioned that results of the tool are not always conclusive, can be subjective and depend on the education level of the mothers, and that in answering some personal questions often families don't answer truthfully, or may not fully understand the questions in order to answer accurately. Another informant highlighted the importance of raising awareness of the community and sensitizing them prior to initiating any screening initiative; he also added that screening, particularly for social services, depends highly on the ability of the researcher to ask the right questions and to be able to dig deeper into an issue.

"Challenges to screening also include the ability of the researcher to gain insight about the depth of the problem and its dimensions and be able to demonstrate it clearly" (Professional-3)

One professional from the accident and emergency department identified a lack of feedback as a challenge to screening, as she thought that often health care professionals would screen for a certain disorder, but are not informed of the result once the patient is admitted.

- **Child Abuse and Neglect**

Policy makers view child abuse as a problem in Oman today; while they don't think that it has reached a significant level, they do feel that it is no longer just sporadic cases or a "myth that does not exist". Interestingly there was some discrepancy between the views of policy makers and front-line

professionals working in the field. Policy makers thought that Oman has already taken a huge leap towards tackling child abuse and neglect, and spoke with pride on achievements such as the Childs Law, National Teams and the Hot-Line for reporting.

"That doesn't mean that there was no abuse before but now it's like an awakening, everyone is talking about it and discussing it, from government bodies, NGOs, civil societies, media. Child abuse today is spreading like the Arab Spring, there are a number of bodies that are currently involved. There is a law, hotline, committee and programs and research" (Professional-4)

" Awareness levels now are much better than before, people today at least know that there is something called child abuse, people now speak about child abuse, so does the media, there are many warning messages and educational videos on the topic" (Professional-5)

Front line professionals, however, thought there were still many gaps in the system and that the local community is not aware of child abuse. Professionals at the hospital acknowledged that having the Childs Law is a powerful tool that they can use now with mothers who insist on discharging their children from the hospital against the child's best health interest, but believed that mothers respond only because of fear of the consequences and not because they think that they could actually be causing harm to the child.

"But when you show them the articles of the child law, they become apprehensive and oblige to you. Not because they understand this is child abuse , but because they are scared of the law, so they are not convinced but are scared of what could happen because it's the law" (Professional-6).

A few of the professionals highlighted that among the main issues in Oman, is the lack of clear definitions as regards what constitutes abuse locally. This is particularly relevant to the use of corporal punishment on children, as up until today many local families use physical punishment as a method for discipline (Gerbarka, 2010).

One professional highlighted that when carrying out awareness campaigns it is important to also focus on concepts related to the "Rights of the Child", and that those institutions serving children such as schools and pediatric departments should have a board of rights at a visible place.

- **Screening For Child Abuse and Neglect**

This section explores the views of professionals about initiating screening for child abuse, the logistics of carrying out the screening, their views on the CAPI, and their opinions on the readiness of Oman to initiate screening.

Reporting of cases of child abuse reaching health facilities was the starting point to initiating the Child Protection System in Oman. Although the system today has grown and stands on many pillars, it is considered a responsive system (UNICEF, 2009). Professionals acknowledged that screening will be add a potential preventive strategy particularly for those regions and families with a history of abuse, as it may help prevent abuse happening to another child in a family with a history. They also highlighted the importance of having a comprehensive robust system that links those mothers screened with other preventive services.

" It will definitely improve the CPS system, especially that we often see children victims from the same family, If we look at the history of the family, its history and parenting style we can predict if abuse was going to happen" (Professional-5).

Another positive contribution that was highlighted was raising the level of awareness in the community. Professionals expected that normally awareness campaigns would precede any screening initiative and that this would be directed to the whole population particularly if the media was involved in the process.

Screening was also perceived as helping to increase understanding about local risk factors in Oman, and provide data on mothers' beliefs and methods of discipline. However, some professionals emphasized the importance of defining the target population prior to initiating screening, as such strategies cannot be provided as a blanket interventions. Others suggested targeting certain populations such as pregnant women and then having another level of filtering.

None of the participants rejected the idea of screening for child abuse and neglect. However, they anticipated a number of challenges to the process, which were mainly similar to those identified for any screening initiatives.

Some of the challenges specific to screening for child abuse were the vagueness of what constitutes abuse in Oman, the lack of proper screening tools, and changing parental attitudes towards corporal punishment as many mothers consider it the norm and do not understand their role and limits in discipline.

"Challenges it is not acceptable, because in our society and environment where we live they still don't accept it as a child abuse, to them it is a normal thing and they have been practicing it, it was practiced on them and it is a normal way. Part of discipline" (Professional-2)

• **Readiness of Oman to Initiate Screening**

Four respondents thought that Oman was ready to initiate screening for child abuse, and used confirmatory phrases such as *"absolutely ready"*, *"now we are ready"* and *"the new Omani generation can change things"*. Positive respondents based their opinions on the availability of trained people, the child law and an administrative system to support the process. They felt that they had witnessed a shift in attitudes following the declaration of the law in 2014 and that the country is ready now to move forward.

"In terms of readiness it is absolutely ready, and only through a needs assessment we can assess how ready a society is to tackle an issue" (Professional-4).

Three respondents did not have an answer to the question but thought the concept was interesting. Two respondents did not think that the Child Protection System is currently ready to be burdened with many possible suspected cases that they don't have the man-power to deal with. They felt that the system should be strengthened first, by increasing numbers and capacity of personal and consolidate the reporting system.

"Oman is not yet ready to start screening, we still need to consolidate the reporting system and strengthen it, but, we can start planning for the next phase by doing a needs assessment" (Professional-8).

Respondents also felt that it is important to have a "management plan" following the screening. They suggested having proper parenting programmes to educate mothers on alternatives to corporal punishment. One

respondent also suggested that there should be a long-term follow-up for mothers scoring positive. She suggested screening mothers at the ANC Clinic with a tool such as the CAPI, and then screening them again in the postnatal period for postnatal depression. This is another common problem and if a mother had both high potential to abuse and postnatal depression then the risk of actual abuse is augmented.

" We must look for risk factors leading to abuse, having high potential is one thing but when you add to it postnatal depression or family break-down, then the risk for actual abuse becomes even greater" (Professional-5)

- **Professional Opinions about the CAPI**

Professionals' views about the CAPI were generally positive in nature, and almost all thought that the CAPI was a good screening tool, comprehensive, focuses on different aspects related to parent-child interactions, and assesses an array of risk factors that may lead to abuse. They also thought that the language was simple, and can be answered by mothers with low levels of education.

"It's a really good tool, it gives you an idea on the living situation of the child in general and specifically on the mother, it is actually an excellent tool and comprehensive" (Professional-1).

"From my experience and I have used many tools, I can tell that this tool is effective, because there are many different translations of it and the process of adapting it to Arabic language has been thorough and robust" (Professional-4).

However, some thought that certain items were Westernized and did not suit an Arabic culture, such as "I enjoy having Pets", they felt that such concepts are very appropriate for a Western culture but not for an Arabic one. Others thought that such concepts are acceptable in Oman but only for Muscat Region, where the population is educated, diverse and affluent.

"I think the tool as a whole is great but there are few issues that we must address" (Professional-9)

Professionals also felt that there was a degree of repetition of the items, and that the tool was very long. They expressed their concerns about the clinic-time jeopardized analyzing the results. One professional stressed the

importance of using a shorter version of the CAPI, if the tool was to be implemented.

Concerns were also raised regarding the truthfulness of mothers completing the tool due to two main issues: first, the tool taps on personal matters that families may often shy away from answering, and second, because certain questions (for example, “I am always a confused person”) require closed yes/no answers, but this did not reflect the reality that individuals may feel differently at different times.

- **Logistics of Implementing the CAPI**

Different ideas were presented by professionals as to where the CAPI should be implemented. The majority thought it should be part of the health system and can be handed to mothers at the Ante Natal Care Clinics or the General Clinics. Two respondents thought that we should make use of Civil Society Organizations and deliver the tool to the houses or through Women Groups. One thought that we could reach mothers through schools. However, professionals agreed that this tool is intended for parents and not for screening teachers, as the items focus on living situations of the parents at home, and parent-child interactions.

"The CAPI cannot be implemented at schools or filled by teachers, I think, the items focuses on the home environment and living conditions of the child"
(Professional-5)

One professional suggested that a child protection clinic be established at secondary care hospitals for screening of high risk parents and follow up of children victims of abuse.

"Maybe we can establish a new clinic for it, as a child protection clinic, like what we have for Down Syndrome, Autism" (Professional-4).

Challenges in implementing the CAPI revolved around sorting logistics of screening and analysis and raising awareness of professionals and community.

"Challenges to CAPI, I think acceptance of the society is among the main challenges; however with proper education we can overcome that. I don't see many more issues" (Professional-1).

7.14 Summary

This chapter aimed to explore views of ten mothers and nine professionals about the CAPI, assess its cultural appropriateness, and investigate readiness of Oman to initiate screening for child abuse as a strategy for prevention from child abuse.

Both mothers and professionals indicated that the Arabic CAPI is culturally acceptable and that the language is clear and easy to use in Muscat (as the population is educated and fairly urban). However, locally the tool was viewed as being for assessing parent-child interactions rather than a tool for assessing potential for child physical abuse.

A number of challenges have to be addressed prior to considering its actual implementation. These include, the logistics pertaining to completing the tool and analyzing the results; the actions to be taken following analysis of the results including development of parenting programmes and improving the understanding of the community on issues related to abuse.

What I really found interesting was that for such a long time, issues pertaining to child abuse were thought of as taboo and research from the Arab world has not attempted much to explore this issue. During these interviews, almost every person had a story or an opinion to share.

Overall, the interview data suggest that collectively, mothers and professionals want change. Mothers want to be better mothers, they want to learn how to better their skills with their children and discipline them without having to hit them. Professionals, especially those working on the front-line, want to provide safer environments for children.

There is a demand from society to raise awareness about child abuse and to put preventive strategies in place. A first stage suggested by the interviewees was using the media to raise awareness of the community about abuse in general and corporal punishment in particular. The second stage was to offer parenting education and alternatives to discipline. Mothers today feel guilty about having their children physically punished but despite their views appear to feel helpless to change the situation.

Chapter Eight

Discussion and General Conclusions

8.1 Introduction

In this chapter, the main findings of this research are summarised with regards to the research questions raised. Conclusions are drawn based on findings on the results of Oman and a comparison with studies carried out by Milner and other cross-cultural versions of the CAPI. Strengths and limitations of this thesis are considered and suggestions for further research are presented. This chapter concludes this thesis with recommendations regarding the implications for research and practice.

8.2 Summary of this research

Child abuse is emerging as a social and public health issue in many countries that have developed systems to recognize and report it (Gilbert et al., 2009; Radford et al.; 2010; Children’s Bureau, 2013; Irenyi et al., 2006). Screening for child abuse is being proposed as a method for prevention, but this requires appropriately validated screening tools. Such measures of assessing the potential for child abuse have been found in the literature to be associated with a number of outcomes related to actual child abuse. Although the CAPI was originally developed in 1986, it is one of the few available well-validated tools for measuring child abuse potential. There is now an extensive literature regarding its reliability and validity in assessing potential for child physical abuse and a range of outcomes related to maternal and child health factors (Guttentag, et al., 2014; Peters & Barlow, 2013; Dukewich et al., 1996; Milner, J., 1991; Cadzow & Armstrong, 1998; De Paul & Domench, 2000; Orme et al., 2000; Fraser et al., 2000; Cerny & Inouye, 2001; Chan et al., 2012, Chudal et al., 2015, Combs- Orme et al., 2000).

The CAPI has been widely translated for use across different languages and cultures but was never tested in Arabic Language. This research was aimed at developing an Arabic Version of the CAPI and assessing its psychometric properties in Oman, in addition to assessing its reliability and validity in an

Arab Muslim population. The study used both qualitative and quantitative methods and followed the standards and guidelines of the International Society of Pharma-economics and Outcomes Research (ISPOR) on cross-cultural translations of psychometric instruments (Wild et al., 2005; Landerkin, 2005). Non- experimental quantitative methods were used to assess the prevalence of mothers scoring above the cut-off value suggested by Milner, stability of the scores over a two-week period and assessment of the psychometrics of the tool in terms of reliability and validity.

Qualitative methods were used during the adaptation period for tool development and for interviewing the mothers and professionals. This was to explore the views of the mothers about the CAPI and their experiences in participating in this research. Although key professionals were not involved in the quantitative research, they were interviewed to get a holistic view of the CAPI and to understand their attitudes about screening for child abuse and neglect.

This study was carried out in the capital area of Oman, Muscat. Six research questions were raised; 1) How best can the English CAPI be translated to Arabic? 2) How do the results produced by the Omani sample population compare to the original English (US) CAPI and other cross-cultural versions? 3) What is the stability of the CAPI score over time? 4) What is the relationship between high scores and demographic characteristics (mother's age, educational level, parity, number of gap years between current and previous pregnancies)? 5) What are the reliability and validity indices of the Omani CAPI, and how do the results compare with other versions of the CAPI? 6) What are the views of stakeholders (mothers and professionals) about the appropriateness of the Arabic CAPI to Oman's culture and local context?

In the next section, the main conclusions for each of the six questions are presented and discussed along with implications for future research and policy.

8.3 How best can the English CAPI be translated to Arabic?

The experience of translating Western psychometric tools into Arabic is not a recent one, and several tools have been translated well into Arabic. However, this process should be done with caution, as there are fundamental cultural and religious differences across different societies (Hambelton et al., 2005). Such differences, if not considered, may affect the reliability and validity of tools and produce unreliable results (Mahmood et al., 2015). Some of the issues that should be considered include preservation of “construct equivalence” both linguistically and psychologically and ensuring cultural suitability of the original tool to the target language (Beaton, et al., 2000, Hambleton et al., 2005).

Prior to translating the CAPI into the Arabic language we considered developing a new tool specific for an Arab Muslim culture. However, development of a tool necessitates having a base-line understanding of characteristics of abusers and local risk factors for abuse. A literature review on the subject indicated that locally very little is known on characteristics of abusers from the Arab world (AlMahroos, 2007) and this lack of information did not support the idea of developing a new tool. Furthermore, the process of developing a new tool (WHO, 1995) and validating it was beyond the time and financial resources allocated as part of this PhD research. Adapting an instrument also facilitates comparing different populations from different backgrounds (Hambleton et al., 2005).

Although there have been many translations of the CAPI, this is, to our knowledge, the only adapted CAPI using a multi-stage methodology that included cognitive debriefing, expert consensus, piloting the tool and back translation (Sidani et al., 2010). The use of such a rigorous methodology is important because differences in translations may affect the validity of the tool.

Following literal translation of the CAPI, discussions with in-country experts, professionals and mothers were carried out to decide on the best terminology to be used, resolve linguistic and grammatical differences, and ensure cultural appropriateness of the items. Cultural differences that

emerged from discussions with participants and experts were reflected in domains related to religion, lifestyle, parenting practices, and relationships between males and females. Such disparities stemmed from differences between Eastern and Western ideologies regarding parenting expectations, discipline techniques and cultures.

Our aim while adapting the CAPI was preservation of items as much as possible. However, a few items needed adaptation for example; “Currently I am in deeply in love” was thought not to reflect the nature of feelings within a marriage content, as within the context of a marriage love is translated into living a steady happy life, rather than an euphoric feeling. In addition, Arab societies tend to be more conservative making it less acceptable to discuss such feelings openly if not confined within a marriage framework. Thus item was changed to "I enjoy a steady married life".

Another item that needed adaptation was “I enjoy having pets”. Discussion with different participants indicated that it was not “enjoyment” of pets that was different in Omani culture, but what constitute ‘pets’ differed. While educated participants who were brought-up in Muscat and were from higher socio-economic status agreed that pets refers to mainly cats and dogs, participants who were not originally from the capital thought that pets could be extended to include other animals such as sheep and goats, which are kept at home to benefit from their milk, but are often loved too. At the end, it was agreed that changing the term “pets” to “animals” would be more appropriate for Oman. The item “my phone number is unlisted” was also viewed as being outdated because many people use mobile phones today which are not necessarily listed. This opinion was also shared by the Chileans, and was deleted in their case (Haz and Ramirez, 1998). It was felt on reflection that due to advancement in tele-communication universally, the same would now apply in all cultures. Hence, this item was changed to "My phone number is confidential".

A great deal of discussion also revolved around the item “I enjoy a good sex life”, as some participants thought it may be offensive to the mothers to ask about such a sensitive issue. However, no consensus was reached to delete

it, and it was decided to preserve it and discuss it further in the qualitative research with the mothers, where again there were controversial opinions as some thought that it was a sensitive issue and should not be discussed while others thought sexual frustration can impact parent-child relationship and it is acceptable to discuss it with a trusted health worker.

A culturally-sensitive approach necessitates ensuring conceptual, item, semantic, operational, and measurement equivalence and this was implemented when developing this tool. Items that raised concerns were discussed with in-country experts, and when there were no differences in opinions, items remained the same. When there were differences, items were written ensuring preservation of the original English meaning. Controversial items were marked and were explored in-depth during the interviews with the mothers, and again mothers had different opinions about them, at the end all items were preserved. A key issue to avoid potential conflict between changing items to becoming more culturally appropriate and losing integrity of the original tool is involving translators who are proficient in both languages and familiar with the cultures involved (Hambleton et al., 2005), in addition to testing the instrument on bilingual individuals to compare their results in both languages. In this research both methods were employed to minimize such differences as much as possible.

Although a rigorous translation process was conducted, there were a number of limitations. First, all participants involved in the translation process were residing in Muscat. Ideally, the sample would have included a wider pool of participants from other regions in Oman, but this was not possible within the available resources. Second, it was only possible to pilot the translated CAPI in two health centres. Again, a larger sample would have provided a more valid test of its application.

This version of the CAPI was developed using a clear dialect of the Arabic language that can be used in Oman and other Arabic speaking countries. However, as there are considerable differences in Arabic dialogue among different Arab countries, an adaptation process is recommended as there are variations in the Arabic spoken word. The process may not need to be as

rigorous as this, but it would be necessary to ensure suitability of the culture in addition to the language. Adaptation from a translated version was used in the development of the Belgian CAPI which used a Dutch CAPI (Grietens, 2007). Similarly, the Chilean CAPI was based on the Latin American and Spanish CAPI (Haz and Ramirez, 1998).

This research aimed at developing an Arabic version of the CAPI that is culturally suitable yet "construct equivalent" to the original English one. A number of processes were followed to achieve this during the development and validation. This included discussion with the author, in-country experts, mothers themselves and back-translation. However, in order to determine the accuracy of the CAPI in detecting parents with high potential it should be tested with a population with a previous history of abuse. It was not possible to carry such testing during this PhD as the child protection system in Oman is still in its infancy stages and it was not possible to recruit a population of such nature. Then again, since the sanctioning of the Omani Child Law in 2014 many strategies have been put forth and the system has evolved and in few years such research will be possible.

8.4 How do the results produced by the Omani sample population compare to the original English (US) CAPI and other cross-cultural versions?

This study was carried out in the Ante Natal Clinic in Primary Health Care. The main reason for choosing this population was that this is a well-defined population with regular scheduled visits, which makes it possible to follow the mothers for the stability study and qualitative research. In addition to that, pregnancy is ideal for identifying mothers with high potential for abuse and delivering an intervention such as a parenting education programme. Furthermore, the CAPI has been extensively researched among this population (Zelenko et al., 2001, Casanueva & Martin, 2007, Nair et al., 2003, Dukewich et al., 1996). However, this may also bring limitations for primiparous mothers who may have not experienced parenting.

Around 12% of the American sample scored above the 215-cut-off value suggested by Milner; this figure was almost double for the Omani

population. The mean score value of the Omani population was 159 and again this was much higher than the American CAPI which was 91. In terms of validity indices, the mean of the Lie Scale was almost triple that of the US American Lie Scale (9.5 compared to 3.5), this finding was shared with many cross validated versions of the CAPI and indicate that perhaps this scale needs adjustment and revision for translated versions (Milner and Crouch, 2012 & Miragoli et al., 2015) and implies that a high score on the Lie Scale should not automatically invalidate an individual CAPI. I was unable to explore this within the resources of this PhD, however, it could be explored further in future research.

However, it should not be automatically assumed that higher scores computed by the CAPI indicate that Omani mothers are more abusive in nature or necessarily carry a higher potential for child physical abuse. It seems likely that the discrepancy may be – at least partly – due to differences in parenting styles, practices and expectations. The use of mild to moderate corporal punishment is not considered to be abusive in Eastern cultures (Gerbarka, 2010), thus Omani mothers may be more willing to admit attitudes of approving physical punishment. Although Oman has adopted the World Health Organization (WHO) definitions of abuse at governmental level, local culture still suggests that corporal punishment is an acceptable way of disciplining a child. In addition, there are no parenting programmes in many Arab countries, and so parents have not been taught alternative methods of discipline. This finding is also in keeping with the lower mean and cut off scores found in the Finish study where physical punishment has been illegal for many years (Ellonen et al., 2017)

Additionally, the high scores could also be attributed to the fact that certain items in the Abuse Scale are considered the norm in the Omani culture; for example, item “young boys should never learn girl’s games” may indicate undefined gender roles, which is not acceptable for a Muslim culture and almost 50% of mothers agreed to this statement.

Items related to parental expectations such as “children should never disobey”, “children should not talk back”, “children should be quiet and

listen” and “a parent must use punishment, if he wants to control a child's behaviour” are considered the essence of parenting in Eastern cultures and most mothers agreed to these items, not necessarily because they are rigid parents but because by upbringing obedient children they are regarded as fulfilling their roles as good parents.

When the results were compared to translated versions of the CAPI, they were found comparable to findings from Mediterranean countries, such as Turkey and Greece where it was reported that 21% and 22% of the population scored above 215 (Kustal, et al., 2011, Diareme, 1997). The higher mean was also comparable to results from Croatia (M= 151, SD= 82.6), Turkey (M= 143) and Greece (M=145. 33, SD= 86.3). Some of these studies attributed such differences between them and the American results to differences in parenting styles (Kustal, et al., 2011) and suggested that a culturally adjusted cut-off score to be computed for translated versions of the CAPI (Milner and Crouch, 2012, Kustal et al., 2011, Diareame et al., 1997, Kawamura et al., 2009). For example, one of the included studies (Kustal et al., 2011) used a cut-off score of 200.5 instead of the 215 and 166 suggested by Milner (1986). This was calculated based on the average score for the total Turkish sample as the mean score for the abuse group was 318, and for the control group, 142.9. The authors attributed the need for developing a different score for the Turkish population to be the high scores reported (i.e. a maximum of 451 for the study group and 388 for the control group) and the high difference in means between the two groups (i.e. M= 200.5, SD= 108.6 for the abuse group, and M= 142.9, SD= 89.9 for the control group). In addition the CAPI was found to show a specificity of 83% at this cut-off point.

Another issue is the weighting each item carries which may vary across cultures. The Chilean Study by Haz & Ramirez (1998) suggested that different items could carry different weighting scales across cultures and some items were found not to be suitable to the Chilean culture; for example, the item related to neatness of a child did not relate to abuse or to social class in the Chilean population. The study concluded that 55 of the 76 items in the Abuse Scale were highly discriminatory (the Abuse scale

consists of 77 items but one item - phone number being listed - was crossed out from the outset). The remaining items ranged between non-discriminatory (6 items) and not good enough to produce differences among the two groups (15 items) (Walker and Davis, 2010).

8.5 What is the stability of the CAPI score over time?

This study also aimed to assess the stability of the CAPI score over two weeks, which means that no significant differences are expected to be observed between the two points of time. Results of the CAPI in Oman were found to be stable as the total mean gain was equal to 1.87 and Pearson $r = 0.89$. Stability of the CAPI scores was also assessed by Kawamura in the Japanese validation of the CAPI (Kawamura et al., 2009) and was found to be stable ($r = 0.93$). These results are comparable with the one day, one week and one month reported by Milner of 0.91, 0.90 and 0.83 respectively. However, the stability results should be treated with caution as only 31% of the mothers returned the form at two weeks, what means that the results represents a smaller number of participants.

8.6 What is the relationship between high scores and parity, number of gap years between current and previous pregnancies?

In a review carried out by Milner and Crouch (2012), a number of factors contributed to high scores in the CAPI including: history of childhood abuse, childhood insecure attachments, foster care during childhood, parental rejection in childhood, and reports of childhood exposure to spouse abuse. Parental factors included depression, anxiety, and mental health problems, and emotional problems, low levels of satisfaction, external locus of control, anger / hostility and aggression, family conflicts and negative family interactions and high expectations of the child and the belief in the use of harsh discipline and corporal punishment. These findings were obtained from studies carried out in different cultures and indicate that risk

factors for child abuse are common across different cultures (Milner and Crouch, 2012).

The current study also aimed at examining locally the association of certain risk factors and their contribution to high scores. These risk factors included income level, education level, living condition (nuclear or with extended family), age of the mother, number of children and the pregnancy gap between this and previous one. A trend was noted between income and education levels and high potential for abuse (i.e. the lower the income and education the higher were the scores for abuse potential). The association was not supported statistically but this could be due to the small numbers in the high scoring group and the high percentage of missing values.

Due to the discovery of oil and gas, Oman is rapidly changing from a conservative society to becoming more urbanized (Al-Lawati et al., 2008). This has led to changes in family structure and movement of families from the regions to the capital Muscat. With all the benefits in raised income and education associated with living in the city, there is also the risk of increasing stress level, which is compounded by the lack of family support. This study did not use any measure to assess stress levels and examine its association with the CAPI scores. This could be explored in the future using the CAPI alongside others tools to measure associated factors. Mothers during the interviews disclosed stress as the main contributor to inflicting corporal punishment on their children. This assumption is supported by the Dutch study which examined the effect of marital conflict and high scores in the CAPI. This study reported a high prevalence of 17% scoring above the cut-off score suggested by Milner. This result is due to the combination of low income and high stress as measured by The Conflict and Problem Solving Scale CPS (Keuning et al., 2002). This result is strikingly high for the Dutch population particularly when a previous study reported level of only 3% of high scores in parents of higher socio economic status (Burjis, 2001 cited from Keuning et al., 2002).

As it is highly unusual to classify a quarter of the population as having a high potential for child physical abuse, a computed cut-off score of 303 was

suggested, which would identify the upper 5% of the population. Computing a different cut-off score for translated versions of the CAPI has been supported by Kustal (2010), Diareme (1997), Kawamura (2009) and Ellonen (2017) in the Turkish, Greek, Japanese and Finish versions.

8.7 What are the reliability and validity indices of the Omani CAPI, and how do the results compare with other versions of the CAPI?

Exploratory factor analysis is one of the most popular methods used for assessing whether different language versions of a test measure the same construct (Hambelton, 2005). Principal Component analysis with Varimax Rotation was performed and 24 factors carried eigenvalues more than 1. The scree plot suggested fewer factors, but the results did not give a precise indication of the number of value factors, suggesting possible four or five factors. Both options were explored separately, looking at the total variance explained and items loading under each factor. Items loading under more than one factor were examined and allocated conceptually taking into consideration the weight of the item. A four and five structure model explained 30.4% and 33% of the variance; however items under these factors overlapped substantially and didn't really add much conceptually (Appendices 17 & 18). This led to the adoption of a three factors structure - Distress, Rigidity, and Unhappiness. These three factors had a similar construct as the original US CAPI and explained 27% of the total variance. The Bartlett's Test of Sphericity was 0.818, above the recommended value of 0.6 and significant ($p < 0.0$).

Factor Analysis was undertaken to explore the local composite structure of the Arabic CAPI and how findings compared with the original CAPI and translated version. The original CAPI is composed of six factor scales (i.e. Distress, Rigidity, Unhappiness, Problems with child and self, Problems with family and Problems from others). In Oman, 24 factors had eigenvalues above 1 of which five had values above 2. Milner reported 15 factors with eigenvalues above 1 (Milner, 1986), and Kawamura (2009)

reported obtaining 20 factors with eigenvalues above 1 in the Japanese version, Ellonen (2017) reported 26 factors with eigenvalues above one, and the composite was tested for 4,5,6 and 7 factors and finally they settled for a five factor-structure which explained 30% of variance.

The factorial structure that was suggested by Milner was not replicated in the majority of translated versions and different structures were reported. In the meta-analysis carried out by Milner and Crouch (2012) that included 11 translated versions of the CAPI, only three studies matched the original factorial structure suggested by Milner (Chan, Lam, Chun, & So, 2006; de la Rubia & Alvarez, 2005; Haz & Ramirez, 1998); three reported five factor structures (de Paul, Arruabarrena, Mugica, & Milner, 1999; Diareme, Tsiantis, & Tsitoura, 1997, Rios, 2010); and one study reported four factor structures (Huang, Chang, Chen, Tsai, & Wang, 1992). Three studies reported on stability of the first three factors (Distress, Rigidity, and Unhappiness) but not on the interpersonal problems factors (Haz & Ramirez, 1996; Kawamura et al., 2009; Pecnik, 2003).

The results of this research suggest the stability of the three main factors (Distress, Rigidity, Unhappiness) but instability in the three interpersonal factors (Milner and Crouch, 2012). Items under Distress included 35 items from the US Distress factor in addition to 7 items from other factors. Rigidity included 8 items from the US Rigidity in addition to an extra 3 from the Unhappiness factor. Unhappiness includes 6 original items and one extra that originally belonged to Rigidity. This might suggest that while rigidity and unhappiness have been explained as two separate factors, the two factors are in fact linked together; perhaps parents who are rigid experience more unhappy feelings. Although the inter-personal factors were not strong as separate domains, they have been merged with the three above factors, particularly with distress.

Reliability was assessed using Cronbach's Alpha; results indicated that the tool has a good internal consistency with Cronbach's alpha coefficient of 0.90 for the Abuse Scale, 0.915 for Distress and 0.733 for Rigidity. Although internal consistency for the validity scales and for the abuse sub-

scales were low, such results were also identified in other studies (Miragoli et al., 2015 & Milner and Crouch, 2012).

8.8 What are the views of stakeholders (mothers and professionals) about the appropriateness of the Arabic CAPI

This study used a qualitative approach to explore the attitudes of mothers and professionals regarding the CAPI as a screening tool, and regarding its use for screening potential for child physical abuse. Analysis of the data provided insight into the personal and cultural factors associated with the use of corporal punishment in the Omani culture. Originally, the analysis was based on the themes used to develop the semi-structured interviews as explained in the previous chapter. However, during the analysis of the data new themes emerged; these were ideas or phrases that recurred repeatedly throughout the interviews with the informants and were contributing to the deeper understanding of the main original themes.

In general, the CAPI was found to be acceptable by the mothers not only as a tool for screening for potential for child abuse but also as a source of information about issues related to parent-child interaction. Mothers said that the items have made them reflect on how they interacted with the children, not only in their day to day lives but also in terms of whether specific situations might happen, in terms of whether their behaviours were appropriate or not. I felt this was an important issue, as the tool is intended for screening for child physical abuse, however, the majority of mothers commented that answering the items made them reflect on matters related to emotional abuse and parent child interaction. The two mothers who associated the tool to merely child protection were a doctor and teacher. This may be related to the current societal movement in Oman on child abuse and neglect, which currently is taking place at institutional level (health care, social development and education). Perceptions were however overall positive in nature.

The controversial opinions regarding specific items were witnessed at all levels of this research. There were no items that all or even a majority of

respondents thought of as unacceptable, and this indicates the diversity of the population in Muscat. Items that were flagged during the interviews with the mothers were similar to the doubts that I had when I first studied the CAPI.

“I enjoy a good sex life” was by far the most frequently discussed item among both mothers and professionals. While some mothers expressed a feeling of embarrassment while answering this question, others felt it to be acceptable and that sexual frustration can have its toll on children. They also thought that it is acceptable to ask such a question within a context of health, and some felt that it is acceptable to discuss the topic provided the tool was handled by women only and no men were involved in the process at any point.

The use of corporal punishment is deeply rooted in the Omani culture and is still the norm among most mothers interviewed; however, mothers are aware of the negative short and long term implications of it but are unable to forbid using it due to many factors including being beaten as children, being stressed out, not knowing alternative methods of discipline and inability to control their anger.

Mothers linked the use of corporal punishment on the child to adverse ill health today particularly mental health and poor social interactions. What I found striking in this research, was the amount of guilt-feeling associated with beating a child; this was evident through mothers’ confessions and tears as they remembered certain incidences that had happened. There was a general sense that some mothers today are not convinced that it is the best discipline method to be used, but they have not been taught alternative methods of discipline and ways of self-regulation.

They identified modern parenting techniques as one solution to the problem and that included using methods such as time out, and walking away from the child while you are angry. However, the problem was that there are no parenting programmes in Oman as yet. There are also no awareness campaigns about the negative consequences of corporal punishment.

Professionals stressed that raising awareness of the community against the use of corporal punishment is a key intervention.

Other issues from interviews with professionals related to screening for child abuse and neglect and whether they thought it would strengthen the child protection system. Professionals seemed to have their reservations on whether screening would improve the detection of cases or overload the system with “suspected cases” that would consume resources to investigate. Another major concern was "why screen if there is no solution to the problem?" There was a sense of agreement that in general screening would improve the level of awareness of health care providers, but that this also can be achieved in other ways. There were no reservations on the CAPI itself as a tool, in terms of suitability to local culture and dialogue, but it was thought of as a very long tool and is not easy to practically implement as a universal tool. Professionals felt that it can be used for a targeted group of the population or for research purposes.

Interviews with professionals highlighted important elements in regards to initiating screening for child abuse and neglect in general and the use of the CAPI specifically. Concerns differed between professionals from a health and social care backgrounds. Policy makers from social care had two main concerns: first, while the Child Protection System (CPS) is not yet robust and there are inadequate staff to deal with the existing cases, we may not yet be ready to initiate screening; second, how confident can we be using the CAPI as the tool of choice?

Policy makers from the health domain supported screening using the CAPI provided that there is a "treatment" for the issue such as, for example, parenting programmes that can address such issues and modify behaviour. Front line professionals from the health domain supported the initiation of screening which they compared to screening for autism or Down's syndrome or any other medical health issue, which is in concordance with the general guidelines for initiating any screening strategy (Hodge, 2004).

8.9 Implications for Policy

Several policy implications can be drawn from this research. First, findings from this research support developing strategies that addresses prevention of child physical abuse. Strategies should focus initially on raising awareness of the community about the consequences of corporal punishment both on a short and long-term basis. That should be aligned with developing clear definitions regarding what constitutes child abuse within the Omani population. Currently practices do not ban corporal punishment at home and this is not considered a form of abuse to families. These campaigns can be delivered to the general population through the media and target specific groups such as parents, health care providers and teachers through seminars, campaigns and workshops.

Second, this research has highlighted the importance of educating parents about modern discipline through parenting programmes. These programmes are effective in improving a wide range of parent-child outcomes such as parental child management, discipline practice and child abuse potential (Barlow et al., 2006, Barlow et al., 2011). Such programmes can be delivered jointly through both ministries of Social Development and Health. Parents to be enrolled can be recruited through the ANC Clinics. For this the CAPI may be used as the screening tool of choice and to be administered as a pre/post intervention assessment. Currently there are no programmes in Oman focusing on educating parents about the use of positive discipline techniques. This research has highlighted that there is a conflict between what parents think is right and what is practiced.

Third, investing in locally developed parenting programmes is key for policy makers in Oman today. What this research has clearly highlighted is that there is an apparent demand and need for such programmes. In Oman there is a need to develop parenting programmes that focus on improving parent-child communication and teaching parents alternatives to disciplinary practices such as corporal punishment.

Fourth, there is a need to raise awareness on issues related to the rights of the child. This should be targeted at all facilities related to children such as

schools, health care facilities and places children go to. This can be developed with the children themselves to empower children and also raise awareness of care givers that children should be treated with dignity and respect.

Fifth, improving coordination between sectors involved in the child protection system and raising capacity of front-line professionals dealing with cases. This was identified by the professionals during the interviews. Improving this will inevitably reflect on the overall reporting and responding to cases of child abuse and neglect.

8.10 Implications for Future Research

Findings from this research indicate that the CAPI is acceptable for use in an Arab, Muslim, conservative culture. Results also indicate similarities between findings from Oman and other cross-validated versions of the CAPI. However, there is a need to assess the CAPI at a national level, and by including fathers and other regions of Oman to be able to generalize the results to the whole country. Such research would also mean validating the suggested cut-off score for the CAPI in Oman.

The CAPI should also be assessed among populations with previous history of abuse and not. Unfortunately due the current weakness of the Child Protection System in Oman, it was not possible to carry this out through this research. Having developed and tested the translated CAPI, there is now needs to test it in relation to such outcomes to identify those who are truly are at risk of abusing their children.

The gold standard test for the CAPI would be assessing its predictive validity. That is by developing prospective studies to evaluate whether those with high scores go on to abuse their children, and those with low scores do not. This however, requires having resources, a robust child protection system and home-visiting nurses.

8.11 Conclusion

The principal aim of this research was to assess the reliability and validity of an Arabic version of the CAPI and explore views about its acceptability as a

tool for assessing potential for child physical abuse. Towards achieving this goal, the most robust attempts were made to produce and test this important tool. Findings from this research indicates that it is possible to produce a psychometrically strong version of the CAPI, that appears to be acceptable for use in Arabic populations despite cultural differences about definitions of child abuse and parenting practices. Future policy should address whether this is the best way forward and future research should address its use nationally and with other populations.

Findings from this research also support development of prevention strategies for child abuse and neglect even if at the early stages they focus on clearly defining physical abuse and raise awareness of consequences of corporal punishment.

Parents today are aware that they should not use old methods of parenting that depend on threat, and corporal punishment. However the lack of proper parenting education and the inherited legacy of corporal punishment do not support changing behaviours. To achieve that policy makers should invest in developing parenting programmes that are locally developed and culturally appropriate. What this research has highlighted is that such programmes are likely to be widely accepted by the community. As in the interviews I learnt that mothers were aware of some of their own negative experiences and how it has shaped them, and were in search of resources and ways to learn more and better themselves as individuals and mothers.

The CAPI in Oman was perceived as having value beyond its purpose as a tool for screening for child physical abuse. This could be due to the fact that it made mothers reflect on their behaviour in addition to them having that inner voice, that they want to and should reduce corporal punishment.

Many positive lessons are learned from this research that can have practical implications in shaping the child protection system in Oman and the development of prevention strategies. However, more research is needed to in terms of validating the CAPI before it can be finally used in Arabic.

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QUESTIONNAIRE FORM VI

Joel S. Milner, Ph.D.
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Name: _____ Date: _____ ID#: _____
 Age: _____ Gender: Male _____ Female _____ Marital Status: Sin___ Mar___ Sep___ Div___ Wid___
 Race: Black ___ White ___ Latino ___ Am. Indian ___ Number of children in home _____
 Asian Am. ___ Other (specify) _____ Highest grade completed _____

INSTRUCTIONS: The following questionnaire includes a series of statements which may be applied to yourself. Read each of the statements and determine if you **AGREE** or **DISAGREE** with the statement. If you agree with a statement, circle **A** for agree. If you disagree with a statement, circle **DA** for disagree. Be honest when giving your answers. Remember to read each statement; it is important not to skip any statement.

●○○○

- | | | |
|---|---|----|
| 1. I never feel sorry for others | A | DA |
| 2. I enjoy having pets | A | DA |
| 3. I have always been strong and healthy | A | DA |
| 4. I like most people | A | DA |
| 5. I am a confused person | A | DA |
| 6. I do not trust most people | A | DA |
| 7. People expect too much from me | A | DA |
| 8. Children should never be bad | A | DA |
| 9. I am often mixed up | A | DA |
| 10. Spanking that only bruises a child is okay | A | DA |
| 11. I always try to check on my child when it's crying | A | DA |
| 12. I sometimes act without thinking | A | DA |
| 13. You cannot depend on others | A | DA |
| 14. I am a happy person | A | DA |
| 15. I like to do things with my family | A | DA |
| 16. Teenage girls need to be protected | A | DA |
| 17. I am often angry inside | A | DA |
| 18. Sometimes I feel all alone in the world | A | DA |
| 19. Everything in a home should always be in its place | A | DA |
| 20. I sometimes worry that I cannot meet the needs of a child | A | DA |
| 21. Knives are dangerous for children | A | DA |
| 22. I often feel rejected | A | DA |
| 23. I am often lonely inside | A | DA |
| 24. Little boys should never learn sissy games | A | DA |
| 25. I often feel very frustrated | A | DA |

●○○○

26.	Children should never disobey	A	DA
27.	I love all children	A	DA
28.	Sometimes I fear that I will lose control of myself	A	DA
29.	I sometimes wish that my father would have loved me more	A	DA
30.	I have a child who is clumsy	A	DA
31.	I know what is the right and wrong way to act	A	DA
32.	My telephone number is unlisted	A	DA
33.	The birth of a child will usually cause problems in a marriage	A	DA
34.	I am always a good person	A	DA
35.	I never worry about my health	A	DA
36.	I sometimes worry that I will not have enough to eat	A	DA
37.	I have never wanted to hurt someone else	A	DA
38.	I am an unlucky person	A	DA
39.	I am usually a quiet person	A	DA
40.	Children are pests	A	DA
41.	Things have usually gone against me in life	A	DA
42.	Picking up a baby whenever he cries spoils him	A	DA
43.	I sometimes am very quiet	A	DA
44.	I sometimes lose my temper	A	DA
45.	I have a child who is bad	A	DA
46.	I sometimes think of myself first	A	DA
47.	I sometimes feel worthless	A	DA
48.	My parents did not really care about me	A	DA
49.	I am sometimes very sad	A	DA
50.	Children are really little adults	A	DA
51.	I have a child who breaks things	A	DA
52.	I often feel worried	A	DA
53.	It is okay to let a child stay in dirty diapers for a while	A	DA
54.	A child should never talk back	A	DA
55.	Sometimes my behavior is childish	A	DA
56.	I am often easily upset	A	DA
57.	Sometimes I have bad thoughts	A	DA
58.	Everyone must think of himself first	A	DA
59.	A crying child will never be happy	A	DA
60.	I have never hated another person	A	DA
61.	Children should not learn how to swim	A	DA
62.	I always do what is right	A	DA
63.	I am often worried inside	A	DA
64.	I have a child who is sick a lot	A	DA
65.	Sometimes I do not like the way I act	A	DA
66.	I sometimes fail to keep all of my promises	A	DA
67.	People have caused me a lot of pain	A	DA
68.	Children should stay clean	A	DA
69.	I have a child who gets into trouble a lot	A	DA
70.	I never get mad at others	A	DA

71.	I always get along with others	A	DA
72.	I often think about what I have to do	A	DA
73.	I find it hard to relax	A	DA
74.	These days a person doesn't really know on whom one can count	A	DA
75.	My life is happy	A	DA
76.	I have a physical handicap	A	DA
77.	Children should have play clothes and good clothes	A	DA
78.	Other people do not understand how I feel	A	DA
79.	A five year old who wets his bed is bad	A	DA
80.	Children should be quiet and listen	A	DA
81.	I have several close friends in my neighborhood	A	DA
82.	The school is primarily responsible for educating the child	A	DA
83.	My family fights a lot	A	DA
84.	I have headaches	A	DA
85.	As a child I was abused	A	DA
86.	Spanking is the best punishment	A	DA
87.	I do not like to be touched by others	A	DA
88.	People who ask for help are weak	A	DA
89.	Children should be washed before bed	A	DA
90.	I do not laugh very much	A	DA
91.	I have several close friends	A	DA
92.	People should take care of their own needs	A	DA
93.	I have fears no one knows about	A	DA
94.	My family has problems getting along	A	DA
95.	Life often seems useless to me	A	DA
96.	A child should be potty trained by the time he's one year old	A	DA
97.	A child in a mud puddle is a happy sight	A	DA
98.	People do not understand me	A	DA
99.	I often feel worthless	A	DA
100.	Other people have made my life unhappy	A	DA
101.	I am always a kind person	A	DA
102.	Sometimes I do not know why I act as I do	A	DA
103.	I have many personal problems	A	DA
104.	I have a child who often hurts himself	A	DA
105.	I often feel very upset	A	DA
106.	People sometimes take advantage of me	A	DA
107.	My life is good	A	DA
108.	A home should be spotless	A	DA
109.	I am easily upset by my problems	A	DA
110.	I never listen to gossip	A	DA
111.	My parents did not understand me	A	DA
112.	Many things in life make me angry	A	DA
113.	My child has special problems	A	DA
114.	I do not like most children	A	DA
115.	Children should be seen and not heard	A	DA

116.	Most children are alike	A	DA
117.	It is important for children to read	A	DA
118.	I am often depressed	A	DA
119.	Children should occasionally be thoughtful of their parents	A	DA
120.	I am often upset	A	DA
121.	People don't get along with me	A	DA
122.	A good child keeps his toys and clothes neat and orderly	A	DA
123.	Children should always make their parents happy	A	DA
124.	It is natural for a child to sometimes talk back	A	DA
125.	I am never unfair to others	A	DA
126.	Occasionally, I enjoy not having to take care of my child	A	DA
127.	Children should always be neat	A	DA
128.	I have a child who is slow	A	DA
129.	A parent must use punishment if he wants to control a child's behavior	A	DA
130.	Children should never cause trouble	A	DA
131.	I usually punish my child when it is crying	A	DA
132.	A child needs very strict rules	A	DA
133.	Children should never go against their parents' orders	A	DA
134.	I often feel better than others	A	DA
135.	Children sometimes get on my nerves	A	DA
136.	As a child I was often afraid	A	DA
137.	Children should always be quiet and polite	A	DA
138.	I am often upset and do not know why	A	DA
139.	My daily work upsets me	A	DA
140.	I sometimes fear that my children will not love me	A	DA
141.	I have a good sex life	A	DA
142.	I have read articles and books on child rearing	A	DA
143.	I often feel very alone	A	DA
144.	People should not show anger	A	DA
145.	I often feel alone	A	DA
146.	I sometimes say bad words	A	DA
147.	Right now, I am deeply in love	A	DA
148.	My family has many problems	A	DA
149.	I never do anything that is bad for my health	A	DA
150.	I am always happy with what I have	A	DA
151.	Other people have made my life hard	A	DA
152.	I laugh some almost every day	A	DA
153.	I sometimes worry that my needs will not be met	A	DA
154.	I often feel afraid	A	DA
155.	I sometimes act silly	A	DA
156.	A person should keep his business to himself	A	DA
157.	I never raise my voice in anger	A	DA
158.	As a child I was knocked around by my parents	A	DA
159.	I sometimes think of myself before others	A	DA
160.	I always tell the truth	A	DA

Appendix 2

PRIVATE

Dr Jumana Al Abduwani
PhD Health Sciences
Warwick Medical School
University of Warwick
Coventry
CV4 7AL

4 October 2016

Dear Dr Al Abduwani

Study Title and BSREC Reference: *Assessing Reliability and validity of the Arabic Child Abuse Potential Inventory in Arabic Language among pregnant women in Oman* REGO-2015-1697 AM01

Thank you for submitting a substantial amendment application for the above-named project to the University of Warwick's Biomedical and Scientific Research Ethics Sub-Committee.

I am pleased to confirm that the changes that you wish to make to this study have been approved.

Please keep a copy of the signed version of this letter with your study documentation.

Yours sincerely

pp 

Professor John Davey
Chair
Biomedical and Scientific
Research Ethics Sub-Committee

**Biomedical and Scientific
Research Ethics Sub-Committee**
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Biomedical and Scientific Research Ethics Committee (BSREC)
Application Form for Ethical Approval of Substantial Amendment

SECTION 1. PROJECT DETAILS	
1.1 Project Title:	Assessing Reliability and validity of the Arabic Child Abuse Potential Inventory in Arabic Language among pregnant women in Oman
1.2 BSREC Reference:	REGO-2015-1697
SECTION 2. APPLICANT DETAILS	
2.1 RESEARCHER	

Researcher's Title: Dr
Researcher's Forename: Jumana
Researcher's Surname: Al Abduwani

Researcher's Faculty/School and Department: WMS

Researcher's Status:

Undergraduate Student
Taught Postgraduate Student
Research Postgraduate Student
Staff
Other

Please specify:

If Student:

Name of course/qualification: PhD Health Sciences

If Staff:

Researcher's Post:

2.2 RESEARCHER'S CONTACT DETAILS

Warwick e-mail address: j.al-abduwani@warwick.ac.uk
Daytime telephone number: +968 99 333 253
Postal address: P.O.Box 1556
Postal Code 114
Muscat, Oman

2.3 SUPERVISOR - COMPLETE FOR ALL STUDENT PROJECTS

Supervisor's Title: Dr
Supervisor's Forename: Peter
Supervisor's Surname: Sidebotham

Supervisor's Post: Associate Clinical Professor

Supervisor's Faculty/School and Department: WMS
Supervisor's Warwick e-mail address: P.sidebotham@warwick.ac.uk
Supervisor's daytime telephone number: 74878

SECTION 3. SUMMARY OF SUBSTANTIAL AMENDMENT

No major changes were made to the methods of conducting the research, however documents related to the qualitative part are now finalised, these include interview questions, invitation letter, Patient Information Leaflet and consent form.

This is a mixed methods research, and each phase of the study builds on the previous phase, and it was crucial to test the acceptability of the CAPI in the Omani culture in order to gauge the dimensions to be explored through the qualitative research.

Guidance notes for completing this section:

- *Briefly summarise the main changes proposed in this amendment;*
- *Explain the purpose of the changes and their significance for the study;*
- *Highlight all amendments in the supporting document(s) so that they can easily be identified.*

What changes to the research design or methodology are proposed? (e.g. a changed research strategy; the inclusion of a new group of participants/population; or an addition to the content of the study in some way):

Changes are related to details of the group of participants and qualitative research documents (appendices 4 to 7). Research design and method has been approved initially.

What specific ethical issues are raised by the changes, and how are they addressed:
No specific ethical issues are raised during this part.

What changes to the research team are proposed:

No changes to the reach team.

SECTION 4. DETAILS OF AMENDED DOCUMENTS SUBMITTED

Document Title	Version	Date
BSREC Protocol	2	10/7/2016
Patient Information leaflet for qualitative part	1	10/7/2016
Participant Consent for Qualitative research	1	10/7/2016
Interview Questions	1	10/7/2016

SECTION 5. SIGNATURES AND DECLARATIONS

5.1 RESEARCHER/APPLICANT

I undertake to abide by the University of Warwick's Research Code of Practice in undertaking this study.

I understand that I must not implement substantial amendments to a previously approved study until I have received approval from the relevant Research Ethics Committee of the University of Warwick.

I understand that any changes that I would like to make to this study after receiving approval from BSREC must follow BSREC procedures as detailed on the BSREC web pages.

Name of Researcher: Jumana AlAbduwani

Signature: *Jumana*

Date: 21/7/2016

NB: The applicant must post a signed copy of this form to: BSREC Administrator, A010, Medical School Building, Warwick Medical School, University of Warwick, Coventry, CV4 7AL.

5.2 SUPERVISOR AUTHORISATION FOR STUDENT PROJECTS

I confirm that I have read this application and will be acting as the student researcher's supervisor for this amended project.

The amendment is viable and the student has the appropriate skills to undertake the amended research.

I understand that substantial amendments to research and related projects with human participants must not be implemented without approval from the relevant research ethics committee of the University of Warwick.

Name of Supervisor:

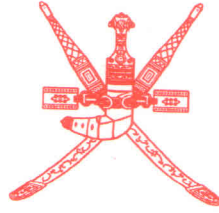
Signature:

Date: 21/07/16

NB: An e-mail from the Academic Supervisor that states the above, in lieu of a wet ink signature on this form, may be sent to: bsrec@warwick.ac.uk

Sultanate of Oman
Ministry of Health

Directorate General of Planning
and Studies



سلطنة عمان
وزارة الصحة
المركزية العامة للتخطيط
والدراسات

Ref. : MH/DGP/R&S/PROPOSAL_APPROVED/47/2015

Date : 15.12.2015

الرقم :
التاريخ :
الموافق :

Dr. Jumana Ahmed AlAbduwani
Principal Investigator

Study Title: "Assessing potential towards Child Physical Abuse in Omani Pregnant Women across the Peri-natal period".

After compliments

We are pleased to inform you that your research proposal " Assessing potential towards Child Physical Abuse in Omani Pregnant Women across the Peri-natal period " has been approved by Research and Ethical Review & Approve Committee, Ministry of Health.

Regards,



Dr. Ahmed Mohamed Al Qasmi
Director General of Planning and Studies
Chairman, Research and Ethical Review and Approve Committee
Ministry of Health, Sultanate of Oman.

Cc
Day file

24541032 SPC

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hayja

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Quriyat EHC	Ayisah Masoud Al Rassadi	24847666	24837500	99216067
Mazarah H/C	Fatima Ahmed Al Busafi	24842001	24842001	92319780
Bama H/C	Rahma Sulyum Al Farraji	24635403	99884557	92743612
W.A H/C	Mini Mathew	99312631	99312631	

Wilayat Al Amrat	Badriya Humaid Al Dhawi	24877083	24877084	99324464
Al Amrat H/C	Samiya Ahmed Al Akhzami	24876512	24877519	99460933
Al Nahdha H/C	Aseela Ahmed Al Akhzami	24877795	24877686	99384344
Al Hajer H/C	Nabeela Safer Al Buloshi	99479837	99443401	99330756
Seya H/C	Amal Rashid Al Akhzami	99360778	99312733	99207906

Wilayat Muscat	Zakiya Mohd Al Shamsi	24736710	24736709	99258067
Muscat H/C	Rahma Saeed Al Wehaibi	24738036	24736275	99475535
Yetti H/C	Badriya Sulaiman Al jabri	99210018	99210881	92268033
Seefa H/C	Amina Salim Al jabri	99788148	99312742	92747042

Wilayat Muttrah	Farida Bejar Al Buloshi	24797602	24797603	95458484
Muttrah H/C	Kawther Salim Al Rashdi <i>faiza</i>	24711296	24711262	97318907
W.K H/C	Nasra Ahmed Al Mahrooni	24812944	24812811	99442511
Ruwi H/C	Jamila Qaderbaksh Al Buloshi	24786088	24786070	99439774
Wattiya H/C	Khadija Sulaiman Al Wehaibi	24571744	24571514	99779443
Hay Al Mina H/C	Badriya Hassan Al Buloshi	24714717	24714737	96626612

99322574

Wilayat Bausher	Laila Hamood Al Busaeidi	24501620	24501611	96503350
Al Kuwair H/C	Muna Ahmed Al Ma'wali	24480567	24487303	92535554
Al Ansab H/C	Rahma Salim Al Harthi	24585088	24585787	99885656
Al Gubra H/C	Hamida Hamed Al Hilali	24497226	24497202	92442827
Al Athaiba H/C	Doris Mantos	24497233	24492661	99201153

Wilayat As' Seeb	Hamida Salim Al Shukairi	24450494	24450553	99443300
As' Seeb Spl Comp	Aida Khater Al Henaiei	24541032	24541023	99338631
As' Seeb H/C	Laila Saleem Al Abri	24423044	24621177	92133410
Al Khoud H/C	Badriya Al Shuaibi	24537443	24542620	99470207
Al Muwaleh H/C	Maria Khair Al Buloshi	24536388	24536499	99889239
Al Ma'bella H/C	Shamsa Ibrahim Al Zadjali	24454275	24454277	92992505
S. Al Ma'bella H/C	Hafidha Rashid Al Maharbi	24450567	24456780	99336081
Al Shadi H/C	Asila hamed Al Ma'mari	24455849	24536499	99076419
Al Hail H/C	Amal Saeed Al Wehaibi	24538779	24538990	96007697
N. Al Muwaleh H/C	Moza Sultan Al Mahrooqi	24548411	24546113	95075580

D G H S	Shadya Hamyar Al Ya'rabi	24782108	24782120	99449866
Arrahma Hosp.	Mahmood Mohd Al Zadjali	24815447	24810383	99895202
Renal Dialysis	Zuwaina Habib Al Batrani	24590035	24690037	99743787
Bausher Spl Comp	Sharifa Sulaiman Al Hasni	24594813	24596814	96964451

99515673 (Ay)

faiza ⇒ 99312857

Hospital	2
RDC	1
Spl Comp	2
Standard H/C	22
Non Standard	6
	33

Fax:

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99641724

:Appendix 5

Approval Email From Dr Joel Milner to adopt the CAPI TO Arabic language.

Dear Jumana Al Abduwani,

Thank you for your interest in the CAP Inventory. Although the CAP Inventory has been translated into more than 25 languages, I do not know of any published study that reports on an Arabic translation.

I will be happy to help you with respect to translating the CAP. As

you know, some researchers just do one translation of a measure

whereas others do multiple forward and backward translations. You should be aware that there are publications that discuss how to translate a measure.

Cross-validation work can take many forms and can be a major undertaking ... also it can involve cross validation of post-hoc, concurrent, and future predictive validity as well as construct validity of a scale. I expect that what you would want to do is to

check the CAP Inventory's concurrent predictive validity using an Arabic translation and Arabic speaking sample. Let me know more about exactly what it is that you want to do.

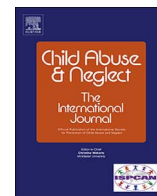
FYI - I have attached a reading list of more than 1200 articles, papers, chapters, theses, dissertations, unpublished works, etc, on the uses and/or limitations and/or psychometric characteristics of the CAP Inventory as well as some other articles.

Regardless of whether or not you conduct research on the CAP Inventory, I wish you the best of luck in your professional endeavors. Best to open the attachments with your "Edit" command.

Joel.

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Full Length Article

The Child Abuse Potential Inventory: Development of an Arabic version



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ABSTRACT

The Child Abuse Potential Inventory (CAPI) is a well-validated screening tool for assessing potential for child physical abuse, and has been translated into many different languages. To date the CAPI has not been translated into Arabic or used in any studies in Arabic-speaking populations. This study reports on the process of adapting the CAPI into Arabic Language which was undertaken following the International Society of Pharma-economics and Outcomes Research (ISPOR) guidelines. The translation/adaptation process was multi-stage, and involved the use of a Delphi process, cognitive debriefing, back translation, and a pilot testing of the Arabic CAPI at two primary health care centers with a population of pregnant women ($n = 60$). Following “literal translation” 73 out of the 160 items needed re-phrasing to adapt the items to the Oman context. No differences were found when comparing results of the translated or back-translated versions to source; however, eight items needed further amendment following translated to back-translated comparison and feedback from the pilot. Iterations were resolved following in-depth interviews. Discrepancies were due to differences in culture, parenting practices, and religion. Piloting of the tool indicated mean score value of 155.8 ($SD = 59.4$) and eleven women (18%) scored above the cut off value of 215. This Arabic translation of the CAPI was undertaken using rigorous methodology and sets the scene for further research on the Arabic CAPI within Arabic-speaking populations.

1. Introduction

Child abuse is a social and public health issue in many countries with serious short- and long-term complications (Children's Bureau, 2013; Gilbert et al., 2009; Radford et al., 2010; Irenyi, Bromfield, Beyer, & Higgins, 2006). A recent meta-analysis estimated global prevalence rates of child maltreatment to be 127/1000 for sexual abuse, 226/1000 for physical abuse, 363/1000 for emotional, 163/100 for physical neglect and 184/1000 for emotional neglect (Stolenbrough, Bakermans-Kranenburg, Alink, & IJzendoorn, 2015). While these figures are calculated from countries with a methodology to quantify the issue, the review concludes that child physical abuse is a widespread, global problem affecting the lives of millions of children annually.

However, previously in many Arab countries such as Oman, the magnitude of child abuse and neglect was not yet clearly

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understood. A number of factors have contributed to this, including the lack of a comprehensive system for data collection, under-reporting by professionals due to the fear of labelling families and risking relationships with parents, lack of a follow-up system for victims of child abuse, the unavailability of a screening system for identifying cases of abuse, and the acceptance of corporal punishment and harmful cultural practices in the community (Al-Mahroos, 2007; Gerbarka, 2010). Despite these problems in 2007, the Ministry of Health in Oman, established a notification system for reporting cases of child maltreatment reaching health facilities. Reported cases were children needing some form of health or legal intervention.

Eight hundred and twenty six (826) cases of abuse warranting medical attention/intervention were collected from 2007 to 2015 from health facilities. Physical abuse is the most common type of abuse reported in Oman. These cases represent only cases warranting medical treatment and range in severity from simple bruises, cuts and burns, to head injuries needing admission, and death (Ministry of Health (Oman), unpublished data). Cases of physical abuse resulting from corporal punishment and discipline not needing medical intervention are not included.

In 2008, the Ministry of Social Development (MoSD) established a multi-disciplinary taskforce for the follow up and support for families where child abuse has been identified. A hotline was also recently established to facilitate direct reporting of cases the teams. A department was established in 2012 with the purpose of consolidating efforts towards preventing and treating child maltreatment. This department is working on capacity building of professionals, establishing a national system for reporting of cases, providing a hotline for reporting of cases and other family related issues and establishing a shelter for children who have been subjected to abuse (UNICEF, 2009). In 2014, the Omani Child Law was endorsed with articles specific to mandatory reporting of child maltreatment and specific punitive actions (Sultan decree, 2014 No 2008/22).

2. Screening for child abuse

The experience of translating Western psychometric tools into Arabic is not a recent one, and several tools have been translated well into Arabic. For example the Edinburgh Postnatal Depression Scale (Halabi, 2006), The Quality of Life Index (Halabi, 2006) and the ISPCAN Child Abuse Screening Tool Retrospective (ICAST-R)

(Dunne et al., 2009). However, this process should be done with caution, as there are fundamental cultural and religious differences between the different societies (Baker, 2012). Such differences, if not taken into account, may affect the reliability and validity of tools and produce faulty results (Mahmood, Abdul-Daim, Peninga, & Adema, 2015).

Screening for child abuse has been proposed as a method of preventing child abuse and neglect (Guterman, 1997; Klevens & Whitaker, 2007). A number of standardized tests are used to predict future risk of child abuse such as The Maternal History Interview 2 (Brayden et al., 1993), Family Psychosocial Risk Inventory (Hunter, Kilstron, Kraybill, & Loda, 1978), Dunedin Family Services Indicator (Muir et al., 1989), the Child Abuse Potential Inventory (CAPI), (Milner, Gold, Ayoub, & Jacewitz, 1984) and the Kempe Family Stress Inventory (Murphy, Orkow, & Nicole, 1985; as cited from a review by Peters & Barlow, 2003).

The CAPI is the most widely used of these and is a self-administered screening tool for assessing parents' potential for child physical abuse that comprises 160 forced-choice items. It contains a total of ten scales, the main one being the Child Physical Abuse scale, composed of 77 items. The abuse scale is further sub-divided into six factor scales which are: Distress; Rigidity; Unhappiness; Problems with Child and Self; Problems with Family; and Problems from Others. The abuse scale has two cut-off scores: 215, indicating that the respondent has characteristics similar to those of known child abusers; and 166, which is a "signal detection" to indicate increased potential for abuse within a higher-risk population. None of the scales are diagnostic of actual abuse (Milner, 1986).

In addition to the abuse scales, the CAPI contains three validity scales: The Lie Scale; Random Response Scale; and the Inconsistency Scale. Scores from the validity scales do not influence the abuse scale; they are, however, used in different combinations to form indices of response bias (Faking-good, Faking-bad, and Random Response index). These indexes are assessed for the purpose of acceptance or rejection of a respondent's results on the Abuse scale. If any of the validity indexes are elevated, the abuse score is not considered to be a true representation of the respondent's actual potential (Milner, 1986).

The CAPI has been extensively used in cross-cultural research (Milner and Crouch, 2012), translated versions of the tool were found from Croatia (Pecnik & Ajdukovic, 1995); Greece (Diareme, Tsiantis, & Tsitoura, 1997); Chile (Haz & Ramirez, 1998); Finland (Haapasalo & Aaltonen, 1999); the Chinese population in Hong Kong (Chan, Lam, Chun, & Ernest So, 2006); Belgium (Grietens, De Haene, & Uyttebroek, 2007); Japan (Kawarama, Takahashi, Akiyama, Sasaki, & Kako, 2009); Thailand (Sawasdippanich, Srisuphan, Yenbut, Tiansawad, & Humphreys, 2010); Turkey (Kutsal et al., 2011); Argentina (Bringiotti, Barbich, & de Paúl, 1998); Spain (de Paúl, Arruabarrena, & Milner, 1991); Germany (Spangler, Bovenschen, Globisch, Krippel, & Ast-Scheitenberger, 2009); Italy (Miragole, Camisasca, & Di Blasio, 2015) and Venezuela (Gamez & Hernandez, 2015). To date, however, there have been no translations of the CAPI into the Arabic language. There is a need to be cautious when using Western-developed tools in countries where there may be fundamental cultural and religious differences, affecting the reliability of the results (Mahmood et al., 2015).

The objectives of the current paper were to: a) Carry out a translation of the CAPI into Arabic based on good practice guidelines; b) Pilot test the Arabic CAPI in Oman and compare the results to those obtained in other Western and non-Western settings.

3. Methods

3.1. Setting

This research was conducted in Oman, an Arab Country in the south-eastern end of the Arab Peninsula. The main religion in

Oman is Islam, and the main language is Arabic. The estimated population of Oman in 2014 was around 4.13 million (2.32 million Omanis) with almost 50% residing in Muscat and the Batinah Regions. Oman is a young country with 14.3% and 34.3% of its population under 5 and 15 years of age respectively (NCSI, 2014). Around a quarter of the population are women of childbearing age (15–49 years) (NCSI, 2014).

3.2. Procedure

Adaptation of the CAPI from English to Arabic was carried out using a multi-stage methodology that included cognitive debriefing, expert consensus, piloting the tool and back translation (Sidani, Guruge, Miranda, Ford-Gilboe, & Varcoe, 2010). Guidelines suggested by the International Society of Pharma-economics and Outcomes Research (ISPOR) on cross-cultural translations of psychometric instruments (Wild et al., 2005; Lenderking, 2005) were used iteratively with some modifications to suit local circumstances.

Following the approval of the CAPI's author (Dr Joel Milner) in 2014 to translate the CAPI from English to Arabic, two translations of the CAPI were independently carried out. One was conducted by a certified translation agency that carries out medical translation services to provide a "Specialist" translation, and the second by the primary investigator for a "Colloquial" translation. Both translations were reviewed, and compared with the English version to ensure equivalence of the meaning in both languages, along with suitability and clarity of the items to the Omani culture. Both translations were discussed with an in-country expert to reflect on the cultural sensitivity and suitability of particular tool items to Oman, and to agree a combined version for further testing. Both translations were compared and the most accurate meaning to the source English was chosen. An Arabic form was finally synthesized for further testing.

3.3. Cognitive debriefing

Cognitive debriefing is used to assess the comprehensibility, clarity and cultural acceptability of the newly-developed tool with a group of the target population. A multi-stage revision process was carried out which involved E-Delphi rounds, in-depth interviews, and expert consensus.

Through personal communications with ministries and organizations involved with children in Oman, ten individuals were recruited. Criteria for selection included being bi-lingual, having an interest in research, and access to the internet. When names and contact details of nominees were received, an email explaining the objectives of the study, duration and expectations of their involvement was sent separately to each participant. Individuals who agreed to take part in this research were then asked to return the email consenting to participate. When participants declined to participate, a thank you email was sent to them and a request to their organization was sent for a replacement.

Upon receipt of the consent email a copy of the translated Arabic CAPI was sent to the participant for review and comments along with the English CAPI. Participants were sent a reminder email on day ten from the first email. Participants who did not respond by the 14th day were sent a reminder email and follow-up phone call. Most participants requested extra time to complete the first revision. If no response was received after 3 weeks, they were considered as having dropped out of that round.

Following the first Delphi round, all comments and feedback were carefully reviewed, categorized and discussed by the researcher and in-country expert to reach consensus and produce a revised version. This second version was sent to the same participants, who were asked to choose between different options where particular discrepancies were found for individual items.

3.4. In-depth interviews

To finalize the Arabic tool, the participants were invited to be interviewed. The interview was divided into two parts: the first part involved a discussion of linguistic variations and the second a discussion of the cultural appropriateness of the items.

After incorporating the feedback from respondents, the tool was adapted and both the Arabic and English versions were shared with the in-country expert and a language expert from the language center at the Sultan Qaboos University, following which minor modifications were made based on their recommendations.

3.5. The pilot

Pilot testing of agreed translated version with local population was carried out in two health centers. This step is an added step and was carried out before the back translation to test operational logistics and acceptance of the tool by health care providers and local population.

It was expected that 3 participants would be recruited per day, and a set of thirty copies of the study tool was therefore prepared and handed to the nurse in charge; each set contained a patient information leaflet, a consent form, and the Arabic CAPI. Clients were recruited at the antenatal waiting area while waiting for their appointment to see the doctors. The tool was presented to them as a tool for assessing attitudes towards child-rearing practices.

Both health centers were visited on a daily basis to provide the nurses with support and to address any logistical issues, such as the provision of a quiet place to complete the questionnaire.

Data were collected on a daily basis from both sites, and entered manually on a secure online database. Double entry was carried out on every 5th form to minimize data entry errors. Results were transferred to an Excel spreadsheet for analysis, which involved the

use of descriptive statistics (e.g. frequencies, means and standard deviations).

3.6. Back translation

Back translation is the process of translating the target language tool into the source language with the aim of verifying the translation of the research instrument. The process involves two main components: comparison between the source and target versions and testing both versions on respondents to elicit any differences in their answers.

Following the development of the Arabic CAPI with comments from the pilot and the cognitive de-briefing process, the Arabic CAPI was given to an independent translator to translate it back to English, following which a group of participants was recruited to compare the three versions to each other as follows: Target to back-translated version; Target to source; and back-translated to source.

3.7. Ethics

Ethical clearance for this research was granted by the Biomedical and Scientific Research Ethics Sub-committee from the University of Warwick, United Kingdom, and the Research and Ethics Review and Approve Committee at the Ministry of Health, Oman.

4. Results

4.1. Preparatory phase

Following forward translation, a number of items were identified as presenting potential issues with cultural sensitivity and suitability within the Omani/Arabic context: “I enjoy having pets”; “Spanking that only bruises a child is okay”; “My telephone number is unlisted”; “Sometimes I worry that I will not have enough to eat”; “I have a good sex life”; and “Right now I am deeply in love”. Following discussion with the in-country expert, it was decided not to delete any of the items of the CAPI at this initial stage and to seek opinion from the local community.

4.2. E-Delphi process

Ten individuals were identified through personal approaches to ministries and organizations involved with children and families and agreed to participate: two social workers from the Ministry of Social Development; three doctors – a Pediatrics Accident and Emergency Consultant and two family physicians from Primary Health Care; two professionals from the Ministry of Education – a teacher and a school social worker; a Nurse from the Early Intervention Society for children with disabilities; and two parents (a mother and a father).

Eight out of ten participants responded to the first round of the review with suggestions to rephrase 73 out of the 160 items. One participant thought that two items were not relevant to the Omani culture (“having a pet” and “telephone number not listed”).

On the second round, seven participants responded with agreement on 62 of the 73 amended items. Three items had minor differences and eight items were thought to require final discussion and approval through the in-depth interview.

4.3. In-depth interview

Three participants agreed to be interviewed: two were interviewed face-to-face and one by telephone. Of the eight items debated, three were resolved by further linguistic modifications and the following five remained controversial; I love having pets, my phone number is not listed, right now I am deeply in love, I have a good sex life, sometimes I worry I don't have enough to eat.

4.4. Results of back translation

4.4.1. The back-translated Arabic to English tool

the back-translated version that was carried out by the professional translator was reviewed and compared with both Arabic and original English versions. Overall, the back translation was thought to be satisfactory. Nine items used complex language and needed rephrasing, two gave a different meaning to what was intended, and one item was missed from translation because the language used was thought to be too technical.

4.4.2. Target to back-translated

three out of seven participants had discrepancies in their responses to the Arabic and the English back-translated versions. An interview was carried out to explore reasons for the discrepancies, this highlighted the following reasons for these discrepancies:

1. The first participant indicated that the tool was too long and that she paid more attention to the first copy that was completed (Arabic); this was resolved when the tool was re-administered at home in a quiet environment
2. The second participant indicated that he addressed each of the questions to himself and that where he was not certain as to

Table 1
Changes to CAPI following the adaptation of the tool into Arabic Language.

CAPI item	Responses from interviewees	Agreed item
I love having pets	Responses of participants were discrepant in that one thought that the habit of keeping pets at home was not relevant in Oman, and two thought that it was relevant. As population structures have changed in Muscat recently and more people are keeping animals as pets today	I Love animals It was agreed that the item was relevant and should not be deleted. However pets was changed to animals to reflect the wider community of Omani population out of the capital Muscat.
My phone number is not listed	All three participants thought this item is outdated and does not have the same meaning as it may have had when the tool was developed.	My telephone number is confidential Agreed to modify this item to reflect modern culture. The term not listed was changed to confidential.
Right now I am deeply in love	Participants did not feel this item was inappropriate in the Omani culture.	I enjoy a stable married life Item was changed to I enjoy a stable married life.
I have a good sex life	One participant felt this item was inappropriate, while a second felt that it is fine because forms are confidential, and the third felt it is ok to ask about it provided the question refers only to sex within a marital context.	Item remained unchanged.
Sometimes I worry I don't have enough to eat.	Participants felt this item does not reflect the economic level of the people residing in Oman.	Sometimes I worry I don't have enough till the end of the month
A child in a mud puddle is a happy sight	this respondent thought that while seeing the happiness on the child's face playing outdoors is good, it would not be considered good for them to be playing in a mud puddle because a number of children drown in mud puddles every year.	The happiness on a child's face playing outdoors is a happy sight
Teenage girls need to be protected	the word "protected" in Arabic translated to 'physical guarding' rather than guarding involving parenting or guidance, and it was therefore suggested that this be changed to "teenage girls need guidance and supervision". This may also reflect cultural variations in parenting style in which Eastern families enforce a higher level of supervision and regulations on girls.	Teenage girls need to be supervised
I am always a good person	The concept of being "always" good is controversial to Islamic religion in which only God is thought of as the flawless, Holy One, whereas humans makes mistakes, and thus cannot always be good. It was suggested that 'always' be replaced by 'often'.	The item was changed to I am often a good person
I have a child who is clumsy	It was felt that the term "clumsy" is offensive when translated into Arabic Language	I have a child who makes a lot of mistakes

whether he agreed or disagreed, he answered agree on one and disagree on the other. However, these discrepancies were resolved through discussion and consensus.

- The third respondent felt that some items were not culturally appropriate, specifically: I enjoy having a pet, A child in a mud puddle is a happy sight, Teenage girls need to be protected, I am always a good person, I am currently in love, My telephone number is unlisted.

4.4.3. Arabic to source

Both Arabic and source (the original CAPI developed by Milner) were given to a bi-lingual associate professor at the Sultan Qaboos University Hospital, and she was asked to complete them separately. All items matched in both versions, but the respondent had reservations about two items; "I have a child who is clumsy" and "sometimes I worry that I don't have enough to eat".

Finally all feedback was reviewed and discussed with the in-country expert and the supervisors at the University of Warwick with the following amendments (Table 1)

4.5. Results of the pilot

4.5.1. Description of the population

The mean age of the mothers was 29.87 (SD = 4.678) and the education level was 13 (SD = 1.9), all the mothers were married.

The pilot indicated that it is feasible to use the CAPI in a Primary Health Care setting. Recruitment rate was 3–5 participants per day and mothers took 20–30 min to complete the CAPI. Interviewing the mothers indicated that they were generally happy with the tool and thought the items were simple, although some questions seemed to them to be repetitive.

The mean score value of the abuse scale was 155.8 (SD = 59.4), with a minimum and maximum of (25–286).

The pilot showed differences in mean abuse scores between the 2 health centers: Abuse scores were higher at Ruwi (M = 164, SD = 68.4) compared to Wattayah, (M = 147, SD = 49) with more cases reported above the 215 cut-off value (Fig. 1).

5. Discussion

The aim of this paper was to document the methodology used in adapting the CAPI from English to Arabic, following a standardized protocol for cross-cultural translational research and the outcomes of that process. The guidelines followed recommended



Fig. 1. Score values at the two Health Centers.

multi-stage processes of translation, back translation, consulting in-country experts, and cognitive de-briefing. Although following such a protocol is time and resource intensive, it is important that such methods are used, when adapting a tool that is not only different in language but also designed for a population from a different culture (Wild et al., 2005).

A number of cultural differences emerged from discussions with participants and experts, and were reflected in domains related to religion, lifestyle, parenting practices, and relationships between males and females. While preserving the semantic equivalence of the original CAPI items, a total of six items had to be adjusted for these reasons. For example, item “Currently I am in deeply in love” was thought not to reflect the nature of feelings within a marriage contest, as within the context of a marriage love is translated into living a steady happy life, Arab societies tend to be more conservative making it less acceptable to discuss such feelings openly.

Another item that needed adaptation was “I enjoy having pets”. Discussion with different participants indicated that it was not “enjoyment” of pets that was different in Omani culture, but the fact that Omani families do not have ‘pets’ in the way that is common in Western Culture; furthermore, the animals most frequently kept (i.e. goats) are not popular in some homes for religious and health-related reasons. It was agreed that changing the term “pets” to “animals” would be more appropriate for Oman. The item “my phone number is unlisted” was also viewed as being outdated because many people rely on mobile phones that are not listed. However, it was felt on reflection that the same would now apply in all cultures.

The results of the pilot showed that while the recruitment target was met at both sites, the rates were higher at one health center than at the other. This difference between recruitment rates may have been due to the fact that the first health center is adjacent to a secondary referral center for obstetrics and gynecology and has a higher number of Ante Natal Care clients.

Classification rate for the American CAPI was found to be 88.2% for the general population group and scored below the cut-off score suggested by Milner. In the Omani population around 18% scored above the cut off value of 215, this result is close to what was found in the validation of the CAPI in Turkey where by 21.2% of the control group were found to be falsely positive (the study had an abuse group), Chile (Haz & Ramirez, 1998) where 19% of the control were found to score higher than the 215 cut-off score and 30% using the 166 cut-off score and Greece where the CAPI correctly classified 78.1% as non-abusers. The mean score value was higher than the American US version (m = 91, SD = 75), it was however comparable to the mean score value cross cultural countries such as the Turkish control group (142.9), Greek and Croatian populations (145, 150.8) respectively.

Although there have been more than 25 translations of the CAPI, rigor of the translation process has differed widely across studies. Such differences are apparent in terms of the proficiency level of translators, the use of qualitative measures such as cognitive debriefing and in-depth expert reviews to resolve discrepancies, carrying out of a back translation, and piloting before implementation. This is important because differences in translations may affect the validity of the tool.

A culturally-sensitive approach necessitates ensuring conceptual, item, semantic, operational, and measurement equivalences. This was implemented when developing this tool and when there were no difference items remained the same, however where there were differences, items were written ensuring preservation of the original English meaning.

While this paper focuses only on the methods used for the first three equivalence measures, later stages of the research will assess the operational and measurement measures through the implementation of the CAPI with a population of Arabic-speaking mothers in Oman, followed by statistical testing to assess its reliability and validity.

Although a rigorous translation process was conducted, there were a number of limitations. First, the number of participants involved in the translation process was small. Ideally, the sample would have included a wider pool of participants, but this was not possible within the available resources. Second, it was only possible to pilot the translated CAPI in two health centers. Again, a larger sample would have provided a more valid test of its application.

This version of the CAPI was developed using a clear dialect of the Arabic language that can be used in Oman and other Arabic speaking countries. However, as there are considerable differences in Arabic dialogue among different Arab countries, an adaptation process is recommended as there are variations in the Arabic spoken. The process may not need to be as rigorous as this, but it would be necessary to ensure suitability of the culture in addition to the language. Adaptation from a translated version was used in the development of the Belgian CAPI which has used a Dutch CAPI (Grietens et al., 2007). Similarly the Chilean CAPI was based on the Latin American and Spanish CAPI (Haz & Ramirez, 1998).

6. Conclusion

This is, to our knowledge, the first Arabic translation of the CAPI, and although the number of participants for both the translation and the pilot was small it has followed a rigorous process, to ensure that the translated version is valid. Very few discrepancies were found and these were resolved by discussions with experts and participants. Further research is now needed, to test the Arabic CAPI in a larger population in order to assess the prevalence and stability of child abuse potential in Arab countries, and to compare these results with those for Western countries, along with longitudinal studies to further assess its predictive value within Arabic contexts.

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Appendix 7

HC- P-

Patient Demographic Form

Demographic Information:	
Name:	
Age(as calculated from your date of birth)	
Address:	
Telephone numbers (Please provide 2 numbers)	1. 2.
Educational level:	<input type="checkbox"/> primary (up to 6 th grade) <input type="checkbox"/> Secondary (up to 12 th grade) <input type="checkbox"/> graduate <input type="checkbox"/> post-graduate
Employment Status:	
Occupation:	
Family Details: Please tick as appropriate	
Living conditions:	<input type="checkbox"/> Nuclear Family <input type="checkbox"/> Extended family
Total monthly income:	<input type="checkbox"/> Up to 500 <input type="checkbox"/> 501 to 1000 <input type="checkbox"/> 1001 – 1500 <input type="checkbox"/> More than 1500
Current pregnancy details:	
Was this pregnancy planned for:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Number of gap years (Number of years between this pregnancy and previous one):	
Current Gestational Age as calculated from the last menstrual period (if Known) or the first ultrasound scan :	
Gravida (Numbers of times you have been pregnant):	

Parity (Number of living children):	
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Appendix 8

The Arabic Version of the Child Abuse Potential Inventory

النسخة المعربة من اداة التقصي عن احتمالية الاساءه الجسدية للاطفال

Developed By Joel Milner (1986), adopted to Arabic by Jumana AlAbduwani (2018)

الارشادات:

يرجى قراءة الاسئلة التاليه بتمعن واختيار الاجابه الاقرب الى نفسك. الرجاء التقيد باجابة واحده فقط لكل سؤال وعدم ترك اي سؤال دون اجابه حيث سيؤثر ذلك في مصداقية الاداة.

الرقم	السؤال	موافق	غير موافق
1.	لا أشعر بالأسى تجاه الآخرين		
2.	أحب الحيوانات المنزلية		
3.	أتمتع دائما بصحة جيدة		
4.	أحب معظم الناس		
5.	أنا إنسانة مرتبكة		
6.	لا أثق بمعظم الناس		
7.	يتوقع الناس الكثير مني		
8.	يجب على الأطفال ألا يسيئوا التصرف أبدا		
9.	غالبا ما أشعر بانني مشوشة التفكير		
10.	ضرب الاطفال الذي يسبب الكدمات فقط مقبول		
11.	أطمئن دائما على طفلي عندما يبكي		
12.	أتصرف أحيانا بدون تفكير		
13.	لا يمكن الاعتماد على الآخرين		
14.	أنا إنسانة سعيدة		
15.	أحب الاستمتاع مع عائلتي		
16.	تحتاج الفتيات المراهقات إلى الحماية		
17.	أشعر دائما بالغضب الداخلي		
18.	أشعر أحيانا بأنني وحيدة في هذا العالم		
19.	يجب أن يكون كل شئ في مكانه الصحيح في المنزل		
20.	أقلق أحيانا من كوني لا أستطيع تلبية احتياجات طفلي		
21.	تعد السكاكين شيئا خطيرا على الأطفال		
22.	كثيرا ما أشعر بانني منبوذة		
23.	أشعر دائما بالوحدة في داخلي (داخل نفسي)		
24.	الاولاد الصغار يجب ان لا يلعبوا لعب البنات ابدا		
25.	كثيرا ما أشعر بالضغط النفسي		
26.	يجب على الأطفال ألا يعصوا الأوامر أبدا		
27.	أحب جميع الأطفال		
28.	أخشى أحيانا أن أفقد السيطرة على نفسي		
29.	أتمنى أحيانا لو أحبني والداي أكثر		
30.	لدي طفل أخرق		

		أستطيع التمييز بين الطريقة الصحيحة والطريقة الخاطئة للتصرف	31.
		رقم هاتفي غير مسجل	32.
		عادة ما تسبب ولادة طفل في مشاكل بالزواج	33.
		أنا إنسانة جيدة دائما	34.
		لا أقلق أبدا على صحتي	35.
		أقلق أحيانا من ألا أملك الكفاية لأكلي	36.
		لم أرغب أبدا في أن أرح شخصا آخر	37.
		أنا إنسانة غير محظوظة	38.
		أنا إنسانة هادئة في معظم الأحيان	39.
		الأطفال مصدر للإزعاج	40.
		تمضي الأمور ضدي في الحياة	41.
		إن حمل الطفل عند بكانه يتسبب في إفساده	42.
		أكون هادئة جدا أحيانا	43.
		أفقد السيطرة على أعصابي في بعض الأحيان	44.
		لدي طفل سيئ	45.
		أفكر في نفسي أولا في بعض الأحيان	46.
		أشعر أحيانا بأنني لا قيمة لي	47.
		لم يكن والداي يهتمان بي	48.
		أشعر أحيانا بالحزن الشديد	49.
		يعد الأطفال حقا بالعين صغار	50.
		لدي طفل يكسر الأشياء	51.
		كثرا ما أشعر بالقلق	52.
		لا بأس في ان تدع الطفل في الحفازات القنذره لفته من الوقت	53.
		لا يجب على الطفل ان يرادد الاخرين ابدا	54.
		أحيانا اتصرف بطريقة طفوليه	55.
		عادة ما أتضايق بسرعة	56.
		تخطر ببالي أفكار سيئة أحيانا	57.
		يجب على الفرد أن يفكر في نفسه أحيانا	58.
		الطفل الذي يبكي دائما هو طفل غير سعيد	59.
		لم أكره أحدا في حياتي أبدا	60.

		يجب على الأطفال ألا يتعلموا السباحة	.61
		أحاول دائما القيام بالتصرف الصحيح	.62
		أشعر بالقلق والتوتر باستمرار	.63
		لدي طفل مريض دائما	.64
		أحيانا أكون غير راضية على تصرفاتي	.65
		أحيانا لا أستطيع الوفاء بوعدى	.66
		هناك أشخاص جرحوني بعمق	.67
		يجب أن يكون الأطفال دائما نظيفين	.68
		لدي طفل يقع دائما في المشاكل	.69
		لا أغضب أبدا من الآخرين	.70
		اتفق مع الآخرين بسهولة	.71
		أخطط دائما للمرحلة القادمة	.72
		أجد صعوبة في الاسترخاء	.73
		من الصعب أن تعرف على من تعتمد هذه الأيام	.74
		أنا أنعم بالسعادة في حياتي	.75
		أنا مصابة بإعاقة جسدية	.76
		يجب ان يكون لدى الاطفال ملابس للعب و ملابس جيده	.77
		لا يفهم الآخرون مشاعري	.78
		يعد الطفل الذي يببل سريره في سن الخامسة طفلا سيئا	.79
		يجب أن يكون الأطفال هادنين ومطيعين	.80
		لدي عدد من الأصدقاء المقربين في منطقتي	.81
		المدرسة هي المسئولة عن تعليم الطفل	.82
		عانلتي تتنازع كثيرا	.83
		اعاني من الصداع دائما	.84
		تعرضت للإساءة عندما كنت طفلة	.85
		يعد ضرب الطفل أفضل وسيلة لعقابه	.86
		لا أحب أن يلمسني الآخرون	.87
		من الضعف طلب المساعدة من الآخرين	.88
		يجب أن يستحم الأطفال قبل النوم	.89
		لا أضحك كثيرا	.90

		أملك مجموعة من الأصدقاء المقربين	.91
		يجب أن يهتم الفرد باحتياجاته الشخصية أولا	.92
		لدي مخاوف لا يعلم بها أحد	.93
		أفراد عائلتي لديهم مشاكل في التفاهم مع بعضهم البعض	.94
		غالبا ما أشعر بأن الحياة لا قيمة لها	.95
		يجب تدريب الطفل على استعمال الحمام منذ بلوغه سنة من عمره	.96
		لعب الاطفال في الطين هو منظر بهيج	.97
		لا يفهمني الآخرون	.98
		عادة ما أشعر بأنني لا قيمة لي	.99
		حياتي غير سعيدة بسبب أشخاص آخرين	.100
		أنا إنسانة طيبة/ رحيمة	.101
		لا أعرف أحيانا لماذا أتصرف بطريقة معينة	.102
		لدي الكثير من المشاكل الشخصية	.103
		لدي طفل يجرح نفسه كثيرا	.104
		غالبا ما أشعر بالحزن الشديد	.105
		يستغلني الناس أحيانا	.106
		حياتي جيدة	.107
		يجب أن يكون البيت لامعا وخال من العيوب	.108
		غالبا ما أحزن بسبب مشاكل خاصة	.109
		لا أهتم أبدا بالغبية والإشاعات	.110
		لم يفهمني أهلي أبدا	.111
		هناك أشياء كثيرة تغضبني	.112
		طفلي لديه احتياجات خاصة	.113
		لا أحب معظم الأطفال	.114
		الاطفال يجب مشاهدتهم و ليس سماعهم	.115
		معظم الأطفال متشابهون	.116
		من المهم أن يستطيع الأطفال القراءة	.117
		غالبا ما أكون مكتتبة	.118
		يجب أن يكون الأطفال أحيانا حساسين لاحتياجات أهاليهم	.119
		غالبا ما أكون غاضبة	.120

		لا يتفق الأشخاص الآخرون معي	.121
		يحافظ الطفل الجيد على ألعابه بشكل نظيف ومرتب	.122
		يجب على الأطفال أن يسعدوا ذويهم دائما	.123
		من الطبيعي أن يرد الأطفال أحيانا على ذويهم	.124
		لا أظلم الآخرين أبدا	.125
		أستمع أحيانا بألا أكون مسنولة عن طفلي	.126
		يجب أن يكون الأطفال نظيفين دائما	.127
		لدي طفل بطئ	.128
		يجب على الوالدين معاقبة أطفالهم إذا أرادوا التحكم في تصرفاتهم	.129
		يجب على الأطفال عدم التسبب في المتاعب أبدا	.130
		أعاقب طفلي إذا بكى	.131
		يجب استعمال الصرامة مع الأطفال	.132
		يجب على الأطفال عدم مخالفة ذويهم	.133
		غالبا ما أشعر بشكل أفضل عن الآخرين	.134
		يثير الأطفال أعصابي أحيانا	.135
		غالبا ما كنت أشعر بالخوف في طفولتي	.136
		يجب أن يكون الأطفال هادنين ومطيعين	.137
		غالبا ما أشعر بالأسى بدون سبب	.138
		تشعرني واجباتي اليومية بالكآبة	.139
		أشعر أحيانا بالخوف من ألا يحبني أطفالي	.140
		أتمتع بحياة جنسية جيدة	.141
		قرأت كتبا ومقالات عن تربية الأطفال	.142
		أشعر أحيانا بالوحدة الشديدة	.143
		يجب على الناس ألا يشهروا الغضب أبدا	.144
		غالبا ما أشعر أنني وحيدة	.145
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**Participant
Information
Leaflet**

**Assessing
Reliability and
Validity of the
Child Abuse
Potential
Inventory in
Arabic Language
among Pregnant
Women in Oman,
(Qualitative
Research)**



**Ministry of Health
Sultanate of Oman**

Introduction:

The (CAPI) is a well-validated screening tool for assessing potential towards child physical abuse, and is implemented in many countries and in different languages, it has however never been tested in Arabic language or among an Arab population..This research involves assessing the reliability and validity of an Arabic Version of the CAPI and exploring views of stakeholders regarding its cultural appropriateness and suitability for use in Oman. This tool can be used in the future to help identify parents who may benefit from additional support, that can be planned and provided jointly through Ministries of Health and Social Development.

About this research:

Using a mixed methodology the study was carried out in three phases; 1) translation and adaptation of the CAPI (Qualitative method), 2) assessing the psychometric properties of the Arabic CAPI (Quantitative method), 3)

exploring the acceptability of Arabic CAPI in Oman (Qualitative study).

- Phase one: Involved forward and back translation of the tool using methods as Delphi criteria with 10 participants from MoH, MoSD, MOE and Parents. In-depth interview with experts from the SQU, and solving discrepancies through expert consensus.
- Phase two: Seven Health centers were randomly selected from Muscat Region, the Arabic CAPI was administered twice with 2 weeks interval with a population of 350 pregnant women.
- Phase Three: Qualitative research with stakeholders and decision makers from MoSD and MoH, parents from the pool of phase two.

We are inviting you to take part in a research study because?

Before you decide whether you want to take part, it is important for you to understand why the research is being done, and what it would involve. We would be grateful if you could take the time to read the following information carefully. If there is anything that is not clear, or if you would like more information, please contact the study researcher ,Dr. Jumana AlAbduwani, whose contact details you will find at the end of this information sheet

What is the aim of this research?

This research aims at developing an Arabic version of the Child Abuse Potential Inventory in Oman and assessing its reliability and validity among a population of pregnant women, and its appropriateness for use as a screening tool for assessing potential toward child physical abuse.

Why have I been selected to take part in the study?

You are being invited as you are a professional or a parent who is involved with issues related to child abuse in Oman. We are interested in your views of screening for child abuse and the tool (Arabic CAPI), itself.

Do I have to take part?

It is up to you to decide to take part or not. This information sheet is provided to help you to make that decision. Even if you decided to take part, you would still be free to withdraw at any time and would not have to give a reason.

What would taking part in the study involve?

You will be invited to take part in a semi- structured interview that would take about one hour. The interview aims at exploring your views on the readiness of Oman to initiate screening for

child abuse as part of a prevention strategy against child abuse and neglect. And your views on the Arabic CAPI itself. The tool will be sent to you two weeks before the scheduled interview.

Who would know about me taking part in the study?

The research team would know whether you had agreed to take part in the study. All information that you provided would be treated as confidential and would not be shared with anyone outside the research team.

When writing up the findings of the study the researchers would take care to ensure that they did not reveal the identity of participants, and any quotations that were used for the purpose of reports or presentations would be anonymous.

What are the benefits of taking part?

While your participation might not have a direct benefit for yourself it would help with the overall assessment of the utilisation of the Arabic CAPI as a screening tool for assessing potential towards child physical abuse in Oman and possibly other Arab speaking countries.

What will happen to the results of the research study?

The results of the study will be written up in a final report and the results may also be submitted for publication in professional journals. If you were interested, we would be happy to provide you with a copy of the report.

What happens now?

In one week, the researcher will contact you by telephone to answer any questions you might have, and to ask if you are interested in taking part. If you are not interested, we will thank you for your time. If you were interested, we will agree on a time and a place for the interview to be carried out.

Who is organising and funding the research?

This research is part of a PhD project that is approved by the Ministry of Health in Oman and the University of Warwick in the UK. The study is being carried out under the supervision of academics at the University of Warwick; Dr Peter Sidebotham and Prof Jane Barlaw. The study principal investigator is Dr Jumana AlAbduwani.

Who has reviewed the study?

The study has been reviewed and agreed by the Biomedical and Scientific Research Ethics Committee at the University of Warwick and the MoH Research Ethics Committee.

What if I want further information about the study?

If you want any further information about the study you can telephone the study researcher Dr Jumana AlAbduwani on 99 333 253.

معلومات عن الدراسة

دراسه كمييه و كيفيه

عزيزتي الام:

يهدف هذا البحث إلى استحداث أداة ملائمة للمجتمع العماني لتقييم اتجاهات الوالدين نحو ممارسات تربية الأطفال . هذه الأداة يمكن أن تستخدم في المستقبل للمساعدة في تحديد الآباء والأمهات الذين قد يستفيدون من الدعم الإضافي في مجال التربييه.

وتوفر هذه النشرة على معلومات حول اهداف الدراسة وسيرها وتفاصيل المشاركة فيها.

هل يتوجب علي أن أشارك ؟

قرار المشاركة متروك لكي نهائيا ولكي الحق في حرية الانسحاب في اي وقت من الاوقات من دون حاجتك لتبرير الاسباب و نؤكد لكي بان قرارك لن يؤثر عليك او على الرعاية الصحيه التي تتلقينها باي شكل من الاشكال.

لماذا تم اختياري للمشاركة ؟

لقد وجهت لكي الدعوة للمشاركة في هذه الدراسة لأنك امرأة عمانية حامل وتتلقين الرعاية الصحيه في احد المراكز الصحيه المشاركه في هذا المشروع البحثي .

ماذا تتضمن مشاركتي في البحث؟

في حالة موافقتك سوف نطلب منك تعبئة استمارة بحثيه مرتين المره الاولى في هذه الزياره و المره الثانيه بعد اسبوعين من تعبئة الاستماره عند ابلاغك ممرضة عيادة رعاية الحوامل بموافقتك. بالاضافه للاستماره البحثيه الاساسيه سوف يطلب منك التوقيع على استمارة الموافقه بالمشاركه و استمارة البيانات الشخصيه والتي تعبا مره واحده فقط.

كما سيطلب منك تقديم تفاصيل الاتصال الخاصة بك إلى الممرضة ، (رقم الهاتف و البريد الالكتروني) . في حالة الحاجة للتواصل معك بغرض الدراسة كما سيتم مخاطبتك في حالة عدم تلقي استمارة البحث في الموعد المحدد.

ماذا علي أن أفعل إذا كنت ارغب بالمشاركه ؟

إذا كنت راغبة في المشاركة في هذه الدراسة ، يرجى إبلاغ ممرضة عيادة متابعة الحوامل في زيارتك القادمة وسوف تقم باعطائك مطروفين.. الرجاء تعبئة المظروف الاول في هذه الزيارة و تسليمه للممرضة و تعبئة المظروف الثاني بعد اسبوعين و تسليمه لموظف الاستقبال.

- وسيدعى بعض المشاركين في مرحلة لاحقة للمشاركة في مناقشة معمقة حول الاستبيان . ان كنتي لا ترغبين في المشاركة الرجاء وضع علامة في المربع المحدد .

ماذا لو أنني لست متأكد من المشاركة في الدراسة؟

إذا كنت تريد المزيد من المعلومات أو لديك أسئلة عن الدراسة ، فلا تتردد في الاتصال بالباحثة

د. جمانة العبدواني على 99333253

أو إرسال استفساراتك عن طريق البريد الالكتروني الى j.alabduwani@gmail.com .

هل هناك أية مخاطر بالنسبة لي بانضمي في هذا البحث ؟

لا توجد أية مخاطر بالنسبة لك، كما ان عمليه تحليل البيانات ستتم بشكل جماعي لاستخدام المعلومات لتطوير أداة لاستخدامها في المستقبل للسلطنة .

من الذي ينظم ويمول هذا البحث ؟

هذا البحث هو جزء من مشروع رسالة دكتوراه وقد تمت الموافقه على المشروع من قبل وزارة الصحة في سلطنة عمان و جامعة وارويك في المملكة المتحدة.

كيف سيتم الاحتفاظ بسرية المعلومات الخاصة بي؟

- لن يحتو نموذج المواقف الأبوية أي بيانات مرتبطة بهويتك ، ما عدا الرقم التسلسلي و المسجل في استمارة البيانات الشخصية. ولن يتم تخزين الاستمارتين معا في نفس المكان ابدا.
- سيتم تقييد الوصول إلى المعلومات الشخصية على جهاز الكمبيوتر ل شخص واحد فقط وهو الباحث الرئيسي .
- سيتم تأمين جميع البيانات لمنع المستخدمين غير المصرح لهم بالاطلاع عليها.

كيف يمكنني الحصول على نسخة من البيانات الخاصة بي ؟

لن يتم توفير بيانات على أساس فردي إلا انه من الممكن الحصول على التقرير النهائي من الدراسة، ومع ذلك إذا كنتي ترغبين في عليه ، يرجى تقديم طلب الرغبة بالمشاركة بهذه الدراسة للممرضة المختصة مع عنوان البريد الإلكتروني الخاص بك وسوف تحسلي على النسخة الخاصة بك عن طريق البريد الإلكتروني.

نشكركم مرة أخرى لأخذ الوقت الكافي لقراءة هذه النشرة ، ونأمل ان نجد لديكم الرغبة في المشاركة بالدراسة خلال الزيارة القادمة لعيادة متابعة الأم الحامل.

لا تترددي في الاتصال بنا على 99333253 .

APPENDIX 11

Assessing reliability and validity of the Child Abuse Potential Inventory in Oman

Consent form for research participants

(Please tick each box)

1. I confirm that I have read and understood the information sheet
2. I confirm that I am willing to take part in this research study
3. I understand that my participation in the study is voluntary
4. I give permission for the interviews to be tape recorded
5. I understand that the information which I provide will be treated in confidence and that it will not be shared with any person outside of the research team.
6. I understand that quotations used in the presentation of findings of the research will be anonymous.

Name _____ (Please print)

Date _____

Signature _____



Ministry of Health
Sultanate of Oman

الموضوع: طلب موعد مقابله لدراسة كيفية عن إستمارة تقييم إتجاهات الوالدين نحو سوء معاملة الأطفال في سلطنة عمان

الفاضل/ة

اتشرف بدعوتكم للمشاركة في هذه الدراسة والتي هي جزء من رسالة الدكتوراه بجامعة وارويك والتي تهدف إلى تقييم قدرة وصلاحيه النسخة العربية من "إستمارة تقييم إتجاهات الوالدين نحو سوء معاملة الأطفال". وستكون مشاركتكم بشكل مقابلة فرديه تستغرق حوالي الساعه.

كما انوه أن هويتكم ستبقى سرية وان الاقتباس من مشاركتكم سوف لن تكون له صلة مباشرة بشخصكم، كما تجدون بالطي نشرة معلومات متضمنة لطبيعة مشاركتكم ومعلومات أخرى عن الدراسة.

سوف اتصل بكم في غضون أسبوع لمعرفة ما إذا كان لديكم أية أسئلة أخرى، والاستماع إلى قراركم حول ما إذا كنتم ترغبون في المشاركة، إذا كنتم قد وافقتم على المشاركة فإنني أطلب منكم التوقيع على نسخة من استمارة الموافقة المرفقة قبل بدء المقابلة.

وان كنتم غير راغبين في المشاركة فاني مقدره وشاكره لكم اهتمامكم ووقتكم .

تفضلوا بقبول فائق الاحترام والتقدير ،،،

د. جمانة العبدواني



Ministry of Health
Sultanate of Oman

تقييم موثوقية وصحة اداة اتجاهات معاملة الطفل باللغة العربية بين النساء الحوامل في سلطنة عمان
دراسه كيفيه

مقدمة:

تعد مشكلة إساءة معاملة الأطفال وإهمالهم من أهم الأولويات الاجتماعية والصحية الوطنية في العديد من الدول المتقدمة وبالتحديد تلك التي وضعت نظاما للتحري عن مدى انتشار المشكله وحدثها، وفي عام 2007 شرعت وزارة الصحة في سلطنة عمان بادراج نظام التبليغ عن حالات اساءة الاطفال والتي تستدعي التدخل الطبي .ويعد الإيذاء الجسدي هو اكثر نوع من اشكال سوء معاملة الاطفال والتي تم الابلاغ عنها من خلال المراكز الصحيه بما يمثل تقريبا 40% من الحالات، و تتنوع حالات الايذاء الجسدي لتشتمل في شدتها الكدمات البسيطة و الحروق و الجروح الى إصابات في الرأس تحتاج إلى العناية الحرجه و الترقيد في المستشفى، مع العلم بان الاصابات المنزليه بسبب العقاب البدني والانضباط والتي لا تستدعي التدخل الطبي ليست مدرجه.

تهدف هذه الدراسه إلى تقييم موثوقية و مدى استعمال اداة (اتجاهات معاملة الطفل) والتي تستخدم للتقصي عن احتمالية إساءة معاملة الأطفال باللغة العربية بين النساء الحوامل في سلطنة عمان، وتعد هذه الاداة من افضل ادوات التقصي المتوفره بالوقت الحالي، وقد تم اصدارها من قبل الباحث جويل ملنر في الولايات المتحدة في عام 1986 و تم ترجمتها الى خمسة و عشرين لغة مختلفه و التي لا تشتمل على اللغة العربية.

حول هذا البحث:

للبحث ثلاثة اجزاء رئيسيه ، ففي الجزء الاول تم تنفيذ عملية التكيف/ الترجمة كخطوة أولى لضمان ملائمة الاداء للسياق العماني، وبعد ذلك انتاج النسخة المعربه من الاداء و اختبارها على عينه من النساء الحوامل اللاتي يترددن على المراكز الصحيه الاوليه بمحافظة مسقط من أجل تحديد الخصائص السيكومترية للمجتمع العماني و مقارنة نتائج السلطنة بالدول الأخرى، اما الجزء الاخير فعباره عن دراسة كيفية يتم من خلالها التقصي عن مدى قبول الاداء وأهميتها العمليه لسلطنة عمان وسيتم تحليل النتائج بشكل منفصل ، ثم معا من أجل استخلاص استنتاجات بشأن مدى ملاءمة و قبول الاستمارة كأداة لتقييم إمكاناتها تجاه الاعتداء الجسدي على الطفل في اللغة والثقافة العربية .

ولقد تم الانتهاء من الجزئين الاولين من البحث و بالتعاون مع وزارة الصحة، ويهدف هذا الجزء الى استطلاع اراء الاهالي و صناع القرار من وزارتي الصحة و التنمية الاجتماعية حول الاستمارة و استعداد السلطنة للنهوض ببرامج وقائية للحد من سوء معاملة الطفل.

هل يجب أن أشارك؟

إن لمشاركتم وأرائكم القيمة اهمية كبرى في وضع تقييم شامل لاداة الفحص ووضع تصور لبرنامج الحماية من الاعتداءات ضد الاطفال، الا ان قرار المشاركة متروك لكم.

وتقدم هذه الورقة بعض المعلومات لمساعدتك على اتخاذ هذا القرار، كما انه لكم حرية الانسحاب في أي وقت من غير ضرورة تقديم عذر لذلك.

ماذا تتضمن المشاركة في دراسته؟

سيتم دعوتكم للمشاركة في مقابلة فرديه قد تستغرق حوالي ساعة واحدة، وتهدف المقابلة في معرفة وجهات نظركم ورائكم في الاداء، كما ننوه الى ان المعلومات ستظل سرية وانه لن تتم مشاركتها مع أي شخص خارج فريق البحث، كما ان أي اقتباسات قد تستخدم لأغراض التقارير أو العرض ستكون مجهولة المصدر.

وعند الانتهاء من البحث سوف تتم كتابة النتائج وعرضها للنشر في التقرير النهائي مع امكانية نشرها في المجالات المتخصصة.

ماذا يحدث الآن؟

سوف تقوم الباحثة بالتواصل معكم من خلال الاتصال الهاتفي خلال أسبوع للرد على أية أسئلة قد تكون لديكم بخصوص هذا الموضوع ولمعرفة إذا ما كنتم ترغبون في المشاركة سوف نتفق معكم على موعد ومكان للمقابلة، وإذا كنتم لا ترغبون بالمشاركة فنحن نشكركم على وقتكم الثمين الذي منحتمونا إياه.

من الذي ينظم ويمول هذا البحث؟

هذا البحث هو جزء من مشروع الدكتوراة التي تتم الموافقة عليها من قبل وزارة الصحة في سلطنة عمان وجامعة وارويك في المملكة المتحدة، وقد استعرضت الدراسة وتمت الموافقة عليها من قبل لجنة أخلاقيات البحوث التابعة لوزارة الصحة وجامعة وارويك .

ماذا لو كنت تريد المزيد من المعلومات عن الدراسة؟

إذا كنت تريد أي معلومات أخرى عن الدراسة يمكنك الاتصال هاتفيا الباحثة في الدراسة الدكتوراة/
جمانة العبدواني على البريد الالكتروني: J.alabduwani@gmail.com

شاكرين لكم حسن تعاونكم .

BSREC PROTOCOL

Assessing reliability and validity of the Child Abuse Potential Inventory in Arabic Language among pregnant women in Oman



Al Abduwani, Jumana

0733805

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BSREC PROTOCOL

Title: Assessing reliability and validity of the Child Abuse Potential Inventory in Arabic Language among pregnant women in Oman

Summary

Child abuse and neglect is a global public health issue and its presentation is emerging in many parts of the world as a national social and health priorities. In 2007 the Ministry of Health in Oman established a reporting system of cases of child abuse and neglect reaching health facilities. Six Hundred and Sixty Cases (660) cases of abuse warranting medical attention/ intervention were collected from 2007 to 2013. Physical abuse is the most frequent type of abuse reported in Oman accounting for almost 40% of cases. These cases represent only those warranting medical treatment/intervention and range in severity from simple bruises, cuts and burns to head injuries needing admission. Cases of physical abuse because of corporal punishment and discipline are not included.

This research will look into assessing potential towards child physical abuse in a population of Omani pregnant women using the Child Abuse Potential Inventory (CAPI) developed by Milner in 1986. The CAPI is a well validated tool and has been used in a variety of settings and among different population groups. There are twenty five different translations of the CAPI, none of which include Arabic. There are two versions of the CAPI, the original full CAPI which includes a total of 160 items with forced agree/disagree options and a Brief CAPI with 24 items only. An ample volume of research exists on the validity and reliability of the full CAPI in cross-cultural settings.

The research will assess the appropriateness of an Arabic translated CAPI as a screening tool for potential toward child physical abuse in Oman. It will also look at the interaction between CAPI scores and local socio- demographic factors, in order to identify those families at greater risk. Identification of families/ children at risk is not for the purpose of labelling families or subjecting them to punitive actions, it is for the purpose of providing parents with support.

Using mixed methods, this research is aimed at producing an Arabic language CAPI and assessing its validity, reliability, acceptance and relevance to Oman. A translation/ adaptation process will be carried out as a first step to ensure its suitability to the Omani context. Following that, it will be administered to a population of pregnant women attending the Ante Natal Clinic at Primary Health Care centers in order to determine its psychometric properties. This will be followed by qualitative research to assess its acceptability and cultural relevance to Oman. Data will be analyzed separately, then together in order to draw conclusions about the appropriateness and acceptance of the CAPI as a tool for assessing potential towards child physical abuse in Arabic language and culture.

Background:

Prevalence of child maltreatment has not been determined in Oman due to the absence of a national system for collecting information. However, data collected through the health system from 2007 to 2013 equate to a total of 660 cases, of which 40 -60% are child physical abuse. The United Nations Secretary General (2006) suggested that child physical abuse is a major contributor to children's ill-health. For children surviving the short-term problems, research suggests that long-term consequences of physical abuse include cognitive, emotional, physical and behavioural problems (Gilbert et al., 2009).

The CAPI is a well-validated tool for measuring child abuse potential, and there is an extensive literature on its reliability and validity in assessing potential for child physical abuse and a range of outcomes related to maternal and child health factors (Guttentag, et al., 2014; Peters & Barlow, 2013; Dukewich et al., 1996; Milner, J., 1991; Cadzow & Armstrong, 1998; De Paul & Domench, 2000; Orme et al., 2000).

While the CAPI has been extensively researched among different population groups, it has not been translated into the Arabic language or specifically implemented with Arab communities. Its translation and use in Oman, could provide important information about potential for child abuse and the socio-demographic characteristics associated with such potential.

Aims/Objectives:

The principal aim of this research is to translate the CAPI into the Arabic language and estimate its reliability, validity, acceptability and relevance in Oman. A secondary aim is to compare the results of the Arabic Brief and Full CAPI in order to assess whether an Arabic version of the Brief CAPI is a reliable screening tool.

The objectives of this research are:

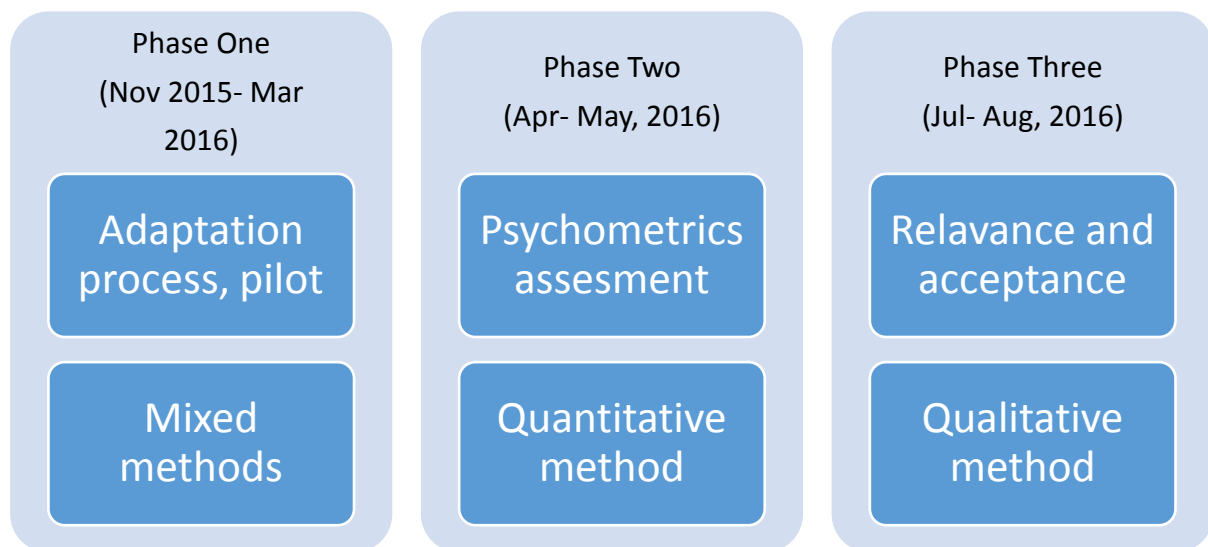
1. To produce an Arabic version of the CAPI; through a multi-stage process of translation/ adaptation, cognitive debriefing and expert consensus;
2. To assess the feasibility of implementing the Arabic translated CAPI using a pilot study;
3. To assess the psychometric properties of the adapted Arabic CAPI in an Omani population of pregnant women;
4. To identify socio-demographic characteristics associated with high scores on the CAPI;
5. To compare the validity of the Brief CAPI to the Full CAPI in Arabic;
6. To explore through qualitative research the cultural relevance of the CAPI in Oman.

Research Questions:

1. Is an Arabic version of the CAPI a reliable and valid tool for screening for potential towards child physical abuse in Oman?
2. Is there a relation between the Abuse scale score and local demographic characteristics (mother's age, educational level, parity, number of gap years between current and previous pregnancies)?
3. Is a translated Arabic Brief CAPI as reliable as the Full CAPI in screening for potential for child physical abuse in Oman?
4. What are the views of stakeholders; pregnant women and professionals on the relevance and acceptability of an Arabic adapted CAPI in Oman?

Research Design/Methodology:

This research involves a mixed-methods design in which both quantitative and qualitative data will be collected and analysed concurrently. The three phases are planned as follow:



Phase One: Translation and piloting the Arabic CAPI:

The aim of this phase is to carry out an adaptation process (from English to Arabic) using multi-stage methodology of translation/ adaptation, cognitive debriefing and expert consensus (Sidani et al., 2010). For this stage of the research the ten steps suggested by the International Society Pharma-economics and Outcomes Research (ISPOR) on cross-cultural translations of psychometric instruments will be followed with some modifications (Wild et al., 2005; Landerkin, 2005).

Step one- Preparation: Approval to translate the CAPI into Arabic Language was obtained from the Author in February, 2015. This step also involves the assessment of the items to ensure its suitability to the local context. This was carried out and discussed with the author, where there was doubt.

Step two- Forward translation: Two English to Arabic translations will be carried out: one by myself and a second by a certified translation agency that carries out medical translation services in Oman (Pioneers, www.pioneerstranslation.com). Translations will be conducted using colloquial Arabic, as it's easier to be introduced to the public.

Step three- Reconciliation: A committee to review the translated version will be formed of myself; an assistant professor at the University of Sultan Qaboos in Oman, a clinical psychologist, a professor from the college of education to assess the readability level, and a member of the community. The committee will review both translations and agree on a suitable version through consensus meetings.

Step four- Back Translation: A back translation will be carried out by a different translator that was not involved in the previous two steps. The purpose of this step is to ensure conceptual equivalence rather than literal translation.

Step five- Review of the back translation: A comparison of the English back-translated versions will be carried as an iterative process by myself and the in-country expert (Dr Muna Al Saadoon) and my supervisors at Warwick, Dr Peter Sidebotham and Prof Jane Barlow.

Step six- Harmonization: Comparison of different versions (if available) will be carried out.

Step seven- Cognitive debriefing: I will carry out testing of the Arabic CAPI through Focus Group Discussion (FGD) with a group of 6 respondents representing different genders and regions of Oman. Recruitment will be carried out through Primary Health Care (PHC), where an announcement will be put forth. I will be recruiting participants of both genders, of ages from 18 to 40, trying to ensure regional representation as much as possible. Participants will be asked to fill the CAPI individually and make notes of any items that are thought to be unclear or culturally inappropriate. Secondly I will carry out a group discussion, for the members to reflect on any items they felt are culturally inappropriate or ambiguous. Where controversy is found among group members, alternatives will be sought from the group members and other translations. As the CAPI has 160 items, this process may be repeated until general consensus is achieved.

Step eight- Review of cognitive debriefing process: Following the transcription of the FGD, revisions will be carried out with the aim of resolving the following two main issues:

- Ambiguous/ unclear items: To provide the best alternative by reporting on responses from participants and discussing them with the local expert committee.
- Culturally in-appropriate: Items that the majority of the group (> 50%) think are culturally inappropriate will be deleted. The previous discussion with the author indicated that this is acceptable, provided that the crossed items do not constitute more than 10% of the total items, and scores can be treated as prorated scores.

Step nine- proof reading: The final version will be thoroughly checked for any errors or typos.

Step ten- Final report: A detailed report of the process, challenges and outcomes will be produced including the results of the pilot.

Pilot testing the CAPI:

Following the finalization of the Arabic CAPI, I will conduct a pilot testing of the instrument in one of the ANC clinics at a health center for a period of two weeks. The aim of the pilot is to assess the feasibility of completing the CAPI in terms of assessing estimates of response rate, time for completion of the tool, and data completeness on the items of the CAPI (Bouwman et al., 2013, Forouzan et al., 2014).

I will be assessing response rate manually by comparing the numbers of clients approached with the numbers submitting a completed form. In order to assess the required time for completion, the start and finish time will be noted. This information will be beneficial to assess the number of health centers to be included in the next phase. Data completeness will be checked manually by looking for items on the CAPI that were not answered.

Following the pilot, I will return to UK to seek further statistical support as results from this pilot will be used to feed into the following phase of the study, particularly in terms of determining the sample size (Beavers et al., 2013).

Phase two: Assessing the Psychometric properties of the Arabic CAPI

This part of the research aims at assessing the psychometric properties of the translated Arabic CAPI. This will be carried out through the administration of the CAPI on a population of pregnant women attending the PHC. Following the data collection, scoring will be carried out at a first stage. This will be followed by statistical analysis to assess the internal consistency, test- retest reliability and construct validity for factor analysis. Identification of the socio-demographic characteristics associated with high scores on the CAPI will be carried out in addition to the comparison of the validity of the Brief CAPI to the Full CAPI in Arabic.

The sample size for this population will depend on the results and findings from the previous step and after discussion with my supervisors and statisticians at the University of Warwick. The aim is to assess the internal consistency using Cronbach Alpha, test re-test reliability using Pearson-r, and construct validity using factor analysis. Scores of the CAPI will be computed and correlation analysis carried out with socio-demographic information, in order to assess if there are associations between total scores (high & low) and socio-demographic characteristics. Due to the current rudimentary system of child protection in Oman, I will not be able to assess the predictive validity of the Arabic version of the tool during this stage of the research, as I will not be able to recruit a sample of parents with a previous history of abuse, nor to apply the tool prospectively and assess later outcomes of reported abuse. This, however, can be assessed through future research on the use of CAPI in Oman. The next section describes the methods for this stage of the research. .

Sample:

Inclusion Criteria

- Pregnant mothers attending primary health care in the Muscat region. The study will include mothers who are primi-parous and multi-parous.

Exclusion Criteria

- Women for whom Arabic is not their first language;
- Women with literacy level of below third grade.
- Mother \geq 34 weeks of gestation.

Selection of health centres

Depending on the sample size and time frame, health centers will be randomly selected from all of the five Wliayats in the Muscat Region.

Sample Size

Following the pilot, results will be reviewed and statistical support will be sought to determine the sample size needed based on the method chosen (Beavers et al., 2013).

Data collection tools

Demographic Form (Please find attached).

A demographic questionnaire will be administered to pregnant women who consent to participate in the study. It will include questions about demographic and social factors that are found in the literature to affect outcomes related to child abuse. Items will include the respondent's age, gestational age, educational attainment, employment status, type of work and income level, and whether they live in a nuclear or extended family. The questionnaire will also ask whether this pregnancy was planned for, if multigravida the number of gap years, gravida and parity.

Variable	Operational definition
Age	Age of the mother as calculated by the date of birth
Gestational Age	Measure of the age of the pregnancy as calculated from the last menstrual period (if Known) or the first ultrasound scan
Educational level	The highest degree of education the mother has completed, this is ranked as primary (up to 6 th grade), Secondary (up to 12 th grade), graduate and post-graduate
Employment status	Categorized as employed within a paid scheme, or not in paid employment, which includes house wives and retirement
Type of work	The type of paid job the participant undertakes, which is categorized as unskilled, technical or professional
Income level	Family income in the sum of all cash payments, received in a month. Ranked as low income (< 499 OMR), medium (499- 999 OMR), high (> 1000 OMR)
Nuclear family	A living condition that includes birth parents of the child and the child only
Extended family	A living condition whereby the family are living with the grandparents and/or other members of the family
Planned pregnancy	Mother intending/ wanting to get pregnant and would stop contraception if she was using them
Number of gap years	Number of years between this pregnancy and previous one.
Gravida	Numbers of times a mother has been pregnant
Parity	Number of living children

- **The Arabic Translated CAPI**

The Arabic translated CAPI refers to the final Arabic translated version following the translation process detailed previously.

- **Consent form (Please find attached)**

All participants will be asked to sign a consent form to indicate their approval to participate in the research.

- **Patient information sheet (Please find attached)**

A patient information leaflet will be provided by health care staff in the health centres to eligible women in order to inform them about the research, and encourage them to participate. The patient information sheet will also include the time scale and details regarding participation study. Confidentiality of information and concealment of the results will be highlighted in addition to the right of the participant to withdraw at any point. Participants will be informed that they will not be able to obtain their individual scores, but could be provided with a lay summary of the research results at the end of the study.

Study Governance in Oman

- Following the approval of the Omani MOH Ethics Committee, a letter will be sent to the Directorate General of Muscat Region, which governs all the five Willayats, informing them about the research and requesting a meeting with the Director General of Planning. The aim of this meeting is to inform them about the research and request their support in involving the Willayats Directors.
- A formal letter will be sent to all the directors of the participating Willayats informing them about the choices of the health centers and requesting them to inform the Medical Officer in Charge (MOIC) of the facility.
- A meeting will be carried out with MOIC to explain about the study and the need to recruit a focal person; the Ante Natal Clinic (ANC) nurse for the implementation of the research.
- A follow-up meeting with the nurse in charge and the ANC nurse at each participating site will also be carried out to discuss the study and requirements for participation. A hands-on training will be carried out to familiarize them with

the forms and train them in how to complete the questionnaire in case the mothers have any questions.

- A manual will also be developed that describes the main study aims and objectives, recruitment criteria, follow up procedures, copies of the forms and contact details.
- The focal nurse will be asked to keep a register of all women who agree to participate, with their contact details.
- Consent forms, and the CAPI questionnaires will be kept with the ANC focal nurse in individual envelopes with serial numbers.
- Follow up with the focal nurse on the progress of recruitment will be carried out on a daily basis via telephone and weekly meetings.
- Following the development of the Arabic CAPI, women attending the ANC clinic will be assessed and invited to participate in the study. The nurse will communicate with the women in the waiting area, explain to them the nature of the study and the CAPI (as questionnaire on parental attitudes towards child rearing practices) and provide them with the patient information leaflet for further information.
- If the mother agrees, the nurse will enter her name in the register and she will be recruited at the next ANC visit.
- At the next visit, the nurse will enter her name, Expected Date of Delivery, contact details (at least 2 numbers) in the registry, and open the envelope to request the mother to sign the consent.
- The woman will be handed the sealed envelope with the rest of the forms (Demographic form and one copy of the CAPI) and asked to fill in one CAPI at the health educator office as it is quiet.
- If any assistance is needed she can request clarification from the nurse.
- Following the completion of the questionnaire, she will be asked to seal it and hand it back to the nurse.
- The second CAPI will be provided in a pre-paid envelope and the mother will be asked to return it after three weeks by hand if she had an appointment or by mail.
- The nurse will calculate the re-test date and enter it at the register.
- I will carry out a reminder call to the mothers the day before.

- The woman will receive a gift (breast feeding cover) upon completing the second CAPI at her next Antenatal visit.
- I will communicate with the nurses on a daily basis from Sunday to Thursday to receive feedback about the recruitment process and fill in details of participants who completed both questionnaires. A visit to the health centers will be carried out on a daily basis to address any emerging issues.
- The nurses will receive a thank you letter and a certificate of participation.

Data management and analysis

- **Data entry**

A master form will be developed for optical readability scanning for data entry purposes. This will be carried out following the development of the final Arabic CAPI.

If electronic data entry is not possible, data will be entered manually and stored through Access software. This is being developed with the support of the ITS at the University of Warwick. The data will be entered and verified for consistency and completeness; then exported to SPSS. Exploratory factor analysis will be carried out on SPSS.

- **Data Storage**

The data will be stored on the researcher's personal computer and hard drive with a password-protected system. All data will be destroyed 5 years following the research.

All questionnaire data will be anonymized and identified by a unique identification number; personal data will be stored separately from the questionnaire data for the purposes of following up participants in the longitudinal study between the pre- and post-natal stages.

The hard copies of the CAPI will be stored in a locked cabinet in Oman for the duration of the PhD. All hard copies will be shredded after three years. The hard copies will only have an identification number which correlates with an identification number on the demographic form, which will be stored at a different place.

- Data Analysis

An Access database will be used for data entry, and information will be processed using Excel, in which formulas will be installed to carry out the calculations for the Abuse Scale, the Inconsistency Scale, the Lie Scale, the Random Response Scale, the Problems with Child and self, Problems with family and Problems from others, Unhappiness, Loneliness, and Rigidity scales. Data will be anonymized prior to analysis and will be fed into the SPSS software for statistical analysis to produce descriptive statistical summaries and identify correlations of high scores with different variables.

I have also been given an administrator access through PRANIC in order to be carrying out the analysis of the CAPI through the software designed by the company free of charge.

- Internal consistency

Reliability will be estimated using Cronbach's alpha, using the scale module on SPSS to generate this statistic. The recommended Cronbach's alpha score is 0.7-0.9 because scores lower than 0.7 are considered to represent low levels of consistency and score higher than 0.95 may reflect duplication of content across items and point to redundancy rather than homogeneity (Streiner, 2003). Therefore, constructs that yield lower and higher values will be deleted (Lance et al., 2006, Nikiema et al., 2012, George and mallery, 2007).

- Test-Retest Reliability

The test- retest reliability will be assessed over the three weeks interval using Pearson r. The assumption is that scores will not change significantly at the re-test.

- Construct Validity

I will be carrying out exploratory factor analysis (EFA) to explore the hypothesized construct of the Arabic CAPI. This method has been used in the translation of the CAPI in Japan, Spain and Greece (Kawamura et al., 2009, Diareme et al., 1997, Haz and Ramirez, 1998). Kawarama (2009) reported that a three factor scale was more suited in Japan, than the six factor scales of the US version. This was attributed to cultural differences (Kawamura et al., 2009).

There are a number of ways of conducting EFA, and the choice of statistical method to be used (Scree test for eigenvalue differences, Oblique Multiple Group method, Procrustes Rotation, and Principle component analysis using Varimax Rotation) will be decided on following the data collection and discussion with statisticians at Warwick (Costello and Osborne, 2005, Beaver et al., 2013)

Phase three: Exploration using qualitative research of the cultural relevance of the CAPI in Oman

I will conduct semi-structured interviews with participants from Stage 2 of the research; women with high and with low/average scores, in addition policy makers and service providers to children from ministries of Health and Social Development. The purpose of the interviews is to assess the interviewees' attitudes towards using a tool such as the CAPI; the acceptability of the tool; the appropriateness of the items; and the relevance of the tool for screening for potential for child abuse in Oman; and whether there is a need to screen for such an issue in Oman.

Sample

I will aim to recruit a minimum of 5 women with high scores above the threshold of 215, 5 women with scores between 166 and 215, and 5 women with low scores below 166. I will also attempt to interview at least 10 professionals from both ministries of Health and Social Development (policy makers, doctors, nurses and social workers), but recruitment will continue until theoretical saturation is reached.

Recruitment

All potential interviewees will be sent a letter of invitation (Appendix 4), an information sheet (Appendix 5) and a consent form (Appendix 6). I will call them after one week to follow up their decision. If they agree a meeting will be arranged at a suitable time and location with a hard copy of the consent to be signed.

Interviews

Interviews will be carried out face-to-face, on a one-to-one basis, using a semi-structured interview form (Appendix 7) that has been designed to address the issues described above. With the interviewee's permission, the interviews will be digitally recorded and transcribed in Arabic language. Interviewees will be assured that information provided will be kept confidential, and that although my research focuses on validating the CAPI, I am currently interested in their opinions and views on its suitability and relevance to Oman.

Analysis

A thematic analysis will be undertaken in order to identify emerging themes. Following the transcription of the interviews, I will immerse myself with the data and identify codes that can be identified along different transcripts. Issues such as transcription mistakes, accuracy in picking up the themes and my own personal views affecting the themes will be cross-checked as through discussion with the local expert.

Required resources

The resources required for this study for data collection and management including the registries for following up the mothers, the demographic forms, and the translated CAPI forms in Arabic will be covered by funds available from the MoHE-Oman. For data management the Access software, Excel and the SPSS Data Software for qualitative research are already available from the University of Warwick IT services.

Research ethics

Ethical approval

Ethical approval will be sought through the Biomedical Research Ethics Committee (BREC) at the University of Warwick, and the Research and Ethical Review Committee (RERC) at the Ministry of Health-Oman. Permission to translate the CAPI to Arabic and use it for the purpose of the study has been obtained from Joel Milner through personal communication.

Due to the sensitive nature of this research topic, a number of ethical issues are anticipated. Measures to ensure justice and the right to participate or withdraw from the study have been put in place, but a number of other ethical issues may arise during or following the research.

Ethical considerations

- **A participant becoming emotional or upset during completion of the questionnaire or during the interview**

If a participant gets upset or emotional during completion of the questionnaire or during the interview, she will be offered emotional support and will be sign-posted to the counsellor at the health center.

- **Disclosure of previous history of abuse**

If a participant signals on the form that she has been abused previously or is being currently abused by a member of her family, I will contact her by phone and signpost her to available services.

- **Health Centre requesting scores of a participant in the study**

I will not disclose information of the participants' scores to the health center manager as it will breach the confidentiality agreement.

- **Disclosure of child abuse information**

If a participant indicates on the free form that she is currently abusing her child or is intending to, the case will be discussed with the MoH Child Protection Task Force for further follow up.

This will be highlighted in the Patient Information Leaflet as: *We are interested to know your views of bringing up your children. Please feel free to write anything you like. All responses will be treated in confidence. However, if you write something that indicates that you or someone else may be harming your child or intending to harm your child, we will need to discuss this with the MoH child protection task force. If you do have any concerns that someone is harming or may harm your child, we would encourage you to discuss this with the researcher or the clinic nurse.*

- **Confidentiality and safety of study questionnaires**

Study information will be entered on to a password-protected computer on a daily basis to ensure information safety. The hard copies of the demographic data (with identifying information) and the CAPI forms will be stored separately to secure safety of information. If the hard copies are lost or stolen, the authorities will be notified immediately.

Benefits and risks

Publication of findings from this research will be disseminated as part of the PhD thesis document. However if a participant indicated that she would like her results, I will save her contact details and send her a copy of the final report.

The CAPI is a tool for assessing potential for child physical abuse and does not include open ended qualitative information that may upset participants. However, if a participant gets upset or emotional during completion of the questionnaire, she will be offered emotional support and will be sign-posted to the counsellor at the health centre.

If a participant signals on the form that she has been abused previously or is being currently abused by a member of her family, I will contact her by the phone and signpost her to available services.

If a participant indicates on the form that she is currently abusing her child or is intending to, the case will be discussed with the Ministry of Health Child Protection Task Force for further follow up.

Financing

Funding of £1600 are allocated for the research from the Ministry of Higher Education- Oman.

Dissemination and Implementation

Findings from this research will be disseminated through the PhD Thesis.

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Appendix 15

Interview Questions for mothers

.1 What is your general opinion about the CAPI? For example, was it hard to complete; easy to complete; what did you feel while you were completing?

.2 What do you think about the time it took you to complete the CAPI ?

.3 Were all the items clear and easy to understand ?

)If no, which were the unclear items?(

.4 What is your opinion about the questions in terms of their relevance to an Arabic Islamic culture such as Oman ?

.5 Did you think any of the questions were offensive or inappropriate ?

)If yes, can you recall which ones you found offensive or inappropriate(?

.6 How do you think routine attendees at the health centre would feel about being asked to complete the CAPI? Would you have minded being asked to complete it as part of the routine procedures?

.7 Do you think the CAPI could be used to help identify parents who may need extra support ?

- Would this be helpful ?
- How do you think it could be used ?

.8 Is there anything else you would like to say about the CAPI ?

.9 What are your views about mothers being screened in pregnancy to see if there are any concerns about their parenting in terms of the future safety of their baby?

.10 How do you think such screening should be carried out?

Appendix (16)

Interview Questions for Professionals

1. What are your thoughts about screening for child abuse? Is it worth doing? What are the potential benefits/drawbacks/barriers?
2. How can screening for child abuse contribute to an improvement in child protection?
3. Would screening for CAN be feasible and appropriate in Oman? What might be needed to implement screening?
4. Are you familiar with any available tools for screening for CAN?
5. What is your opinion about the CAPI?
6. How do you envisage the CAPI being implemented? (when, to whom)
7. In your opinion, what are the main challenges for implementing the CAPI as a screening tool for assessing potential for child physical abuse?

Appendix 17

Four Factor Structure

	Factor 1 DISTRESS 35/36	Factor 2 RIGIDITY 8/14	Factor 3 RIGIDITY 5/14	Factor 4 UNHAPPINESS 6/11
1.	5 D .345 I am a confused person	19 R .390 Everything in a home should always be in its place	19 R .369 Everything in a home should always be in its place	7 R .364 People expect too much from m
2.	9 D .504 I am often mixed up	26 R .423 Children should never disobey	68 R.494 Children should stay clean	14 UH .353 I am a happy person
3.	17 D .416 I am often angry inside	68 R .448 Children should stay clean	76 PWC .321 I have a physical handicap	75 UH .438 My life is happy
4.	18 D .507 Sometimes I feel all alone in the world	75 UH .418 My life is happy	80 R .458 Children should be quiet and listen	81 UH .306 I have several close friends in my neighborhood.
5.	22 D .334 I often feel rejected	77 UH .459 Children should have play clothes and good clothes	111 D .374 My parents did not understand m	141 UH .328 I have a good sex life

6.	23 D .582 I am often lonely inside	78 D .306 Other people do not understand how I feel	115 R .322 Children should be seen and not heard	147 UH .341 Right now, I am deeply in love
7.	25 D .463 I often feel very frustrated	80 R .411 Children should be quiet and listen	127 R .466 Children should always be neat	152 UH .335 I laugh some almost every day
8.	28 D .304 Sometimes I fear I lose control over myself	107 UH .424 My life is good		
9.	36 D .470 I sometimes worry that I will not have enough to eat	108 R .448 A home should be spotless		
10.	38 UH .435 I am an unlucky person	111 D .306 My parents did not understand me		
11.	41 D .469 Things have usually gone against me in life	122 R .430 A good child keeps his toys and clothes neat and orderly		
12.	47 D .486 I sometimes feel worthless	127 R .469 Children should always be		

		neat		
13.	49 D .466 I am sometimes very sad	130 R D.394 Children should never cause trouble		
14.	52 D .582 I often feel worried	138 D .330 I am often upset and do not know why		
15.	56 D .465 I am often easily upset	147 UH .514 Right now, I am deeply in love		
16.	63 D .597 I am often worried inside			
17.	67 PFO .481 People have caused me a lot of pain			
18.	69 PFC .315 I have a child who gets into trouble a lot			
19.	73 D .430 I find it hard to relax			
20.	74 PFO .399 These days a person doesn't really know on whom one can			

	count			
21.	78 D .515 Other people do not understand how I feel			
22.	93 D .447 I have fears no one knows about			
23.	95 D .507 Life often seems useless to me			
24.	98 D .598 People do not understand me			
25.	99 D .500 I often feel worthless			
26.	100 PFO .459 Other people have made my life unhappy			
27.	102 D .368 Sometimes I do not know why I act as I do			
28.	103 D .542 I have many personal problems			

29.	105 D .608 I often feel very upset			
30.	109 D .526 I am easily upset by my problems			
31.	111 D .364 My parents did not understand me			
32.	112 D .536 Many things in life make me angry			
33.	118 D .483 I am often depressed			
34.	120 D .646 I am often upset			
35.	138 D .572 I am often upset and do not know why			
36.	141 UH .431 I have a good sex life			
37.	143 D .514 I often feel very alone			
38.	145 D .627			

	I often feel alone			
39.	148 PWF .357 My family has many problems.			
40.	151 PFO .527 Other people have made my life hard			
41.	153 D .432 I sometimes worry that my needs will not be met			
42.	154 D .432 I often feel afraid			
D= Distress R= Rigidity UH= Unhappiness PWF= Problems with Family PFO=Problems from Others PWC=Problems with Child				

Appendix 18

A Five Factorial structure

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1.	5 D .345 I am a confused person	19 R .390	19 R .369 2	7 R .364	23 D.316 1
2.	9 D .504 I am often mixed up	26 R .423	68 R .494	14 UH .353	25 D.385 1
3.	17 D .416 I am often angry inside	68 R .448 3	76 PWC .321	75 UH .438	69 PWC .308 1
4.	18 D .507 Sometimes I feel all alone in the world	75 UH .418 4	80 R .458	81 UH .306	94 PWF .324
5.	22 D .334 I often feel rejected	77 UH .459	111 D .374	141 UH .328 2	143 D .364 1
6.	23 D .582 I am often lonely inside	78 D .306 1	115 R .322	147 UH .341 1	145 D .386 1
7.	25 D .463 I often feel very frustrated	80 R .411 1&3	127 R .466 1&3	152 UH .335	153 D .311 1
8.	28 D .304 Sometimes I fear that I will lose control of myself	107 UH .424	138 D .330 1		
9.	36 D .470 I sometimes worry that I will not have enough to eat	108 R.448			

10.	38 UH .435 I am an unlucky person	111 D .306 1 &3			
11.	41 D .469 Things have usually gone against me in life	122 R .430			
12.	47 D .486 I sometimes feel worthless	127 R .469			
13.	49 D .466 I am sometimes very sad	130 R .394			
14.	52 D .582 I often feel worried	141 UH .431			
15.	56 D .465 I am often easily upset	147 UH .514			
16.	63 D .597 I am often worried inside				
17.	67 PFO .481 People have caused me a lot of pain				
18.	69 PWC .315 I have a child who gets into trouble a lot				
19.	73 D .430 I find it hard to relax				
20.	74 PFO .399				

	These days a person doesn't really know on whom one can count				
21.	78 D .515 Other people do not understand how I feel				
22.	80 R .300 2&3 Children should be quiet and listen				
23.	93 D .447 I have fears no one knows about				
24.	95 D .507 Life often seems useless to me				
25.	98 D .598 People do not understand me				
26.	99 D .500 I often feel worthless				
27.	100 PFO .459 Other people have made my life unhappy				
28.	102 D .368 Sometimes I do not know why I act as I do				
29.	103 D .452 I have many				

	personal problems				
30.	105 D.608 I often feel very upset				
31.	109 D .526 I am easily upset by my problems				
32.	111 D .364 2&3 My parents did not understand me				
33.	112 D .536 Many things in life make me angry				
34.	118 D .483 I am often depressed				
35.	120 D .646 I am often upset				
36.	127 R .310 2&3 Children should always be neat				
37.	130 R .367 2 Children should never cause trouble				
38.	138 D .572 I am often upset and do not know why				
39.	143 D .514 I often feel very alone				

40.	145 D .627 I often feel alone				
41.	148 PWF .357 My family has many problems.				
42.	151 PFO .527 Other people have made my life hard				
43.	153 D .432 I sometimes worry that my needs will not be met				
44.	154 D .589 I often feel afraid				
D= Distress R= Rigidity UH= Unhappiness PWF= Problems with Family PFO=Problems from Others PWC=Problems with Child					

