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PREVALENCE OF PHYSICAL, PSYCHOLOGICAL AND SEXUAL ABUSE AMONG KUWAITI ADOLESCENTS: ITS IMPACT ON QUALITY OF LIFE, SELF-ESTEEM, AND MENTAL HEALTH

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مسح حجم الإساءة الجسدية والنفسية والجنسية عند المراهقين الكويتيين وآثارها على الصحة النفسية

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الملخص:

تم إنجاز هذه الدراسة بعد الحصول على نتائج من المشاركين من طلبة الثانوية العامة في 36 مدرسة في محافظات الكويت الست. تكونت العينة من 4467 طالباً مسجلين في المراحل التعليمية من الصف العاشر إلى الثاني عشر. جاؤوا من أسر كبيرة ومستقرة متجانسة ومعظم أفرادها يعيشون مع بعضهم بعضاً. وللمحافظة على هذه البيئة المترابطة المستقرة الميسورة الحال، قيّم ثلثا الطلاب جودة حياتهم بأنها جيدة أو ممتازة وأنهم لا يحتاجون إلى العلاج وراضون بعلاقاتهم الاجتماعية ومكان عيشهم وطرق السلامة والحصول على الخدمات الصحية والمال، وعلى الرغم من ذلك فهناك العدد القليل من الطلاب وصفوا حياتهم بأنها ذات متعة ومعنى، وغالبية هذه القلة ترى أنها غير راضية عن الفرص المتاحة للأنشطة الترفيهية.

وقد وجدنا على المتوسط بأن الطلاب قد أبلغوا بأنهم تعرضوا إلى الإيذاء النفسي ثلاث مرات في السنة من **17.7**٪ من أمهاتهم و**14.6**٪ من آبائهم و**17.6**٪ من أشخاص آخرين بالمثل، في السنوات الماضية أبلغ الطلاب أنهم تعرضوا للإيذاء الجسدي خلال ست مرات في السنة من **3.4** ٪ منهم تعرضوا إلى الإيذاء الجسدي من أمهاتهم، **5.3**٪ من آبائهم و**5.8**٪ من آخرين بمعدل ست مرات في السنة. من الجانب الآخر أبلغ حوالي **8.6**٪ من الطلاب أن شخصاً ما قام بإيذائهم جنسياً. وقد تعمدنا بأن نحسب الإيذاء إذا كان حدث حوالي ست مرات في السنة حتى نقوي من مصداقية الإجابات بتضمين حدوث الحالات بطريقة منتظمة واعتيادية وإبعاد الحالات التي تحدث عن طريق المصادفة.

الشيء الجاذب في هذه الدراسة ومن وجهة نظر المجتمع المحافظ الذي ينعم فيه الأطفال بالأمان، أن إيذاء الأطفال موجود وأن الإبلاغ عن حدوثه انعكس على أداء الأطفال النفسي. من أهداف الدراسة هو أننا قمنا بتوضيح أن هناك نزعة لإنكار عملية حدوث إيذاء الأطفال في التقارير التي تصدر من الكويت. فالطفل الذي يتعرض إلى الإيذاء الجسدي والنفسي غالباً ما يتعرض إلى الإيذاء الجنسي. وأن الطفل الذي يتعرض إلى الإيذاء من أحد الوالدين غالباً ما يتحدث بأنه تعرض إلى الإيذاء من قبل الوالد الآخر أو الأشخاص الآخرين. فالنتائج التي استخلصناها من الدراسة توضح أن الطفل الذي تعرض إلى الإيذاء هو إنسان معرض للخطر وللعوائق النفسية الاجتماعية مثل حدوث الأساليب المتعددة من الإيذاء من أشخاص عدة وانتقاص جودة الحياة وتقدير الذات وزيادة معدلات القلق والاكتئاب وأيضاً احتمالية

نشــوء المشــاكل العائلية مثل الطلاق وضعف نوعية العلاقة بينهما. من خلاله تعمدنا للتحكم فــي الأثــر الفوري للعوامــل المتعددة، وجدنــا أنه من خلال اســتمرار الصعوبــات التي تحدث للطفل بأن العلاقة بين الوالدين عاملاً فاعلاً ومســانداً للطفل للتأقلم مع الوضع الذي يعيشــه. بالإضافة إلى ذلك، أوضح التحليل الإحصائي أن إيذاء الطفل النفسي والجسدي له أثر مباشر ضئيـل على جـودة حياتيـة وبخاصة فـي علاقته مـع الوالدين وشـعوره بالقلـق والاكتئاب وتقديـر الـذات. أيضاً وجدنا أن أولئك الذين طلبوا المســاعدة لحل مشــكلاتهم ووجدوا فعالية في المســاعدة المقدمة بأنهم ســجلوا درجــات عالية تتعلق بجــودة حياتهم المقدمــة وتقديرهم لأنفسهم ودرجات منخفضة على مقياس القلق والاكتئاب. وهذا يشير إلى أن أساليب التدخل لها مدلولات قوية في مساعدة الطفل المعرض للإيذاء والذي يحتاج إلى المساعدة.

فــي تحليل إحصائي آخر، ثبـت أن درجات مصداقية الاســتبانات المتعلقة بإيذاء الطفل عالية وذات أهمية إحصائية. ومن أهم ما توصلنا إليه من إنجازات أن استطعنا أن ننشئ أسساً معلوماتيــة قومية تتعلق بإيــذاء الطفل وجودة الحياة الداخلية وتقدير الذات لفئة المراهقين في الكويت. بناءً على النتائج، قمنا ببعض التوصيات فيما قد يقوم به صانعو القرار.

وفيما يتعلق بمشــكلات إيذاء أطفال الكويت، فقد أوصينا بأن معدل انتشار إيذاء الطفل المعلن يستوجب هيكلاً شرعياً مؤسســاتياً للقيام بعمل حماية الطفل الكويتي من الإيذاء.

Abstract

We have completed the work, obtaining the responses of a representative sample of Kuwaiti senior secondary school students in 36 government schools in the six governorates. The sample consisted of 4467 students in classes (years) 10 to 12, made up of 2169 (48.6%) boys and 2298 (51.4%) girls, mean age 16.9 (SD 1.2) years. They hailed from fairly large, stable and harmonious homes, with parents predominantly living together. In keeping with their stable, supportive and affluent material environment, about two-thirds rated their quality of life and health as good/excellent, felt no need for treatment, and were satisfied with their social relationships, condition of place of living, safety, access to health service and availability of money. However, only a bare majority felt that life was enjoyable and meaningful, and most were dissatisfied with the opportunities they had for leisure activities. We found that, averagely, 17.6%, 14.6%, and 17.6% reported that for over 6 times in the year, they experienced psychological abuse by mother, father and others, respectively. Similarly, in past years, 3.4%, 5.3%, and 5.8% of students, reported that they experienced physical abuse over 6 times in the year by mother, father, and others, respectively. On the other hand, 8.6% of the students claimed that someone had sexually attacked them. We have deliberately quantified abuse as occurring at a cut-off level of over six times per year in the child's experience, in order to enhance the reliability of the responses by including the more regular or habitual occurrences, while eliminating chance phenomena.

The interesting thing, from the point of view of a conservative society where the children feel safe, is that this level of child abus is occurring at all, and that the students reported impact on their psychosocial functioning. As a rationale for the study, we had noted that there was a tendency for abuses of children to be denied in Kuwaiti official reports. The child who was psychologically and physically abused was significantly more likely to have experienced sexual abuse. The child who was abused by one parent was significantly more likely to report being abused by the other parent and other people. The scenario that emerged from our results is that: it appears that the abused child is an endangered species, being significantly prone to a host of psychosocial deficiencies and disabilities, including, liability to multiple types of abuse by different persons, diminished QOL and self-esteem, increased levels of anxiety and depression; as well as increased likelihood of family problems, such as parents being divorced and poor quality of parental relationship. In ANCOVA analysis, where we tried to control for the simultaneous impact of multiple factors, we found that, while the abused child's proness to difficulties remained, the quality of parental relationship seemed to be a strong protective factor that can help the child adjust to the situation. In addition, our multiple regression analysis showed that, child psychological, physical and sexual abuse had relatively minor direct impact on QOL, the more important factors being quality of parental relationship, anxiety, depression and self-esteem. In addition, those who sought help for their problems and judged the help received to be effective, had significantly higher QOL, self-esteem, and lower scores on anxiety and depression. This implies that intervention measures have strong potential to help the abused child who needs help.

In a test-retest exercise, the reliability indices of the child abuse questionnaires were fairly high and reached statistical significance. A major importance of our achievement is that we have established national normative data bases for child abuse, subjective quality of life and self-esteem for Kuwaiti adolescents. Based on our findings, we made recommendations about what policy makers can do about the problem of child abuse in Kuwait. In particular, we have recommended that the level of prevalence of child abuse reported here calls for articulating legal and institutional framework for action on child abuse in Kuwait.

We thank the KSAAC for giving us the opportunity to do this work.

Rationale for the study

The World Health Organization (WHO) has recently estimated that, yearly across Europe and Central Asia, about 1300 children die after being beaten or otherwise mistreated by their parents, teachers or carers (Arie, 2005). Yet, for now, the problem is little known or understood in many countries, because of social acceptance, taboos, and children's fear of coming forward, which leads to lack of evidence (Sharma & Gupta, 2004).

In Kuwait, the potential for some level of prevalence of this problem is shown by the fact that in a multi-national study of adult attitudes towards corporal (or physical) punishment, it was found that, 86% of Kuwaitis interviewed approved of physical punishment, 64% approved of severe beating in the case of gross misbehavior, and 9% approved of burning the child (e.g., with matches, cigarettes or heated metal objects) (Durrant, 2005, pg 58). In a report commissioned by the United Nations Committee on the Rights of the Child (CRC) on violence against children in the Middle East and North Africa Region, the Committee expressed its concern about the lack of a specific prohibition in domestic legislation of the use of physical punishment in the home, in schools, in other institutional settings, and on the streets, in Kuwait. The Committee was concerned at the insufficient awareness of and lack of information on domestic violence, ill treatment and abuse, including sexual abuse, both within and outside the family, at the insufficient legal protection measures, as well as at the lack of adequately trained personnel to prevent and combat such abuse in Kuwait (Pinheiro, 2005, Appendix, pp 68-72). According to the UN report, the situation is similar in other Arab countries.

Despite this, there is no systematic study of the prevalence of child/adolescence abuse in the Arab world. In a Moroccan epidemiological study of child sexual abuse among women aged over 20 years, it was found that 9.2% of the 728 women interviewed reported child sexual abuse, the abuser was a family member in 20.4% of cases, and abused women reported significantly higher prevalence of depressive symptoms, compared with those who were not abused (Mehichi & Kadri, 2004). In a retrospective analysis of the records of 38 Palestinian girls who had been sexually abused, it was found that acknowledgement of sexual abuse took place only in situations where the abuse was extremely traumatic, publicly apparent, and the victim absolved of blame, while disclosure resulted in about 10% of the cases in the killing of the victim (Shalhoub -Kevorkian, 1999).

Substantial levels of child abuse have been reported from China (Chen, Dunne & Han, 2004), central Europe (Csorba, Aranyosi, Borsos, Balla, Major & Poka, 2005), Australia (John, Messer, Arora, Fung, Hatzis, Nguven, San & Thomas, 1999), the USA (Renz & Sherman, 1992; Finkelhor, Hotaling, Lewis & Smith, 1990; Sachs-Ericsson, Blazer, Plant, & Arnow, 2005; Finkelhor, Ormrod, Turner, & Hamby, 2005), and Haiti (Martsolf, 2004).

Impact of abuse on the child and the adult:

A lot of concern has been expressed about child abuse, because studies have consistently found that it is associated with a range of symptoms and problems that persist into adult life. There is a widespread impression that individuals who were physically abused during childhood are more likely to abuse their own children than those who were not abused

(Ertem, Leventhal & Dobbs, 2000). Children who have been abused have more persistent behavioral problems(Dubowitz, Black, Harrington, & Verschoore, 1993), their growth is retarded (King & Taitz 1985); abused mothers were more likely to have felt unwanted and unloved as children, and to have lower self-images and more isolation than controls (Altemeier, O'Connor, Sherrod, Tucker, & Vietze, 1986); and for postpartal women with depression followed up for three years, those with a history of abuse rated higher depression and anxiety scores (Buist & Janson, 2001). When they become adults, children who have been abused are more likely to engage in drug abuse (Simpson, Westerberg, Little & Trujillo, 1994; Dembo, Dertke, La Voie, Borders, Washburn, & Schmeidler, 1987), suicidal behavior (Beckinsale, Martin & Clark, 1999; Plunkett, O'Toole, Swanston, Oates, Shrimpton & Parkinson, 2001), and risky sexual behavior (Stock, Bell, Boyer, & Connell, 1997). Those who were abused in childhood are more likely to have poor physical and mental health (Talley, Fett, Zinsmeister, & Melton, 1994; Cohen, Brown, & Smaile, 2001; Martsolf, 2004; Sachs-Ericsson et al, 2005; Kang, Deren & Goldstein, 2002).

In children, a common presentation in emergency rooms is Munchausen syndrome by proxy, fractures (Davis, McClure, Rolfe, Chessman, Pearson, Sibert & Meadow, 1998), and sexually transmitted diseases (Argent, Lachman, Hanslo & Bass, 1995).

In view of this multiplicity of manifestations, a number of intervention programs have been established in the communities (MMWR Morb Mortal Wkly Rep, 2001; MacIntyre & Carr, 1999), in the clinical setting (Saito, 1995; Socolar, Raines, Chen-Mok, Runyan, Green & Paterno, 1998) and in schools (Gibson & Leitenberg, 2000). In addition, a number of states have enacted laws for mandatory reporting (Naidoo, 1997; Johnson, 2002).

The risk factors for child abuse include, being female, having intellectual disability, (Balogh, Bretherton, Whibley, Berney, Graham, Richold, Worsley & Firth, 2001; Honor, 2002) family dysfunction (e.g., growing up in unhappy families, with alcoholic parents, living with only one parent) (Finkelhor et al 1990), being from a large family and having a young mother (Connelly & Straus, 1992).

The problem for policy makers and experts in the field is that clinicians in emergency rooms and teachers at school are poor at recognizing the symptoms of child abuse, while the victims are scared to disclose abuse, the social workers have conflicts about prosecution, and the family and many cultures shroud the phenomenon in secrecy (Kleemeier, Webb, Hazzard, & Pohl, 1988; Sharma & Gupta, 2004; Ziegler, Sammut, & Piper, 2005). In other words, child abuse can easily be detected and prevented, but there are enormous cultural and political obstacles that make society to be complacent about it (Shalhoub -Kevorkian, 1999; Sharma & Gupta, 2004). Accordingly, the various organs of the United Nations, including the WHO and UNICEF, have commissioned special studies on the matter, with one focusing on the situation in the Arab world (Pinheiro, 2005). The WHO has opined that this problem is a contemporary epidemic, and has, therefore, recommended that the health sector should play a more active role in a field that has been dominated by the law enforcement agencies and social welfare (Arie, 2005). It has been suggested that making child abuse a public health problem is the best way forward because health professionals are best placed to gather vital evidence of the harm that adults inflict on their young victims. For instance, in Russia, when medical staff were given a simple algorithm for identifying

child abuse, the number of cases referred from the health sector to social services rose from 17% to 50% (Arie, 2005).

In order to generate such algorithms, there is need to ascertain the burden of the problem, especially in societies in the Arab world where there is difficulty acknowledging it, to determine the patterns of abuse, the risk factors, and its impact on well-being.

Our review of the literature above shows that the vast majority of studies have been concerned with sexual abuse, there appears to be a lack of interest in relating physical, psychological and sexual abuse, there is a paucity of such studies in the Arab world, and the available studies have not usually assessed the impact of child abuse on quality of life (QOL) and self-esteem. Our study is an attempt to help close these gaps in the literature.

The general aim of the study was to assess the burden of child abuse among Kuwaiti adolescents, examine the family factors associated with it, and assess the impact of the problem on general indices of well-being.

The specific objectives of the study were to:

1. Assess the subjective quality of life (QOL) of Kuwaiti adolescents, from the perspective of subjective satisfaction with satisfaction of living, as highlighted in the 26-item version of the World Health Organization's QOL Instrument (the WHO-QOL-Bref). The profile of their self-esteem, and scores on anxiety and depression will also be assessed using the 10 item Rosenberg Self-esteem Scale and 13 items from trauma checklist for childredn (for anxiety and depression)

2. Assess the prevalence of physical, psychological and sexual abuse among a representative sample of youths in Kuwaiti government senior secondary schools (years 10-12 in high schools, and the credit hours system schools - Muqararat), in the life-time and in the past year;

3. Assess the correlates of QOL and self-esteem, independent of prevalence of indices of child abuse;

4. Assess the association of abuse with factors such as, type of family (parents married/divorced; father or mother alive/not,), quality of parental relationships, number of children in the family, parental socio-economic circumstances; governorate where school is situated; child's gender, difficulty in psychosocial functioning, and unmet need for psychosocial assistance;

5. Assess the impact of child abuse on the child's subjective quality of life (QOL), self-esteem and mental health; and

6. Assess the dimensions of QOL that can emerge from factor analysis of the WHO-QOL-Bref, the Self-esteem scale and anxiety/depression items

This is with a view to obtaining valid and reliable data that can provide the information to help highlight the burden of the problem on society in a way that policy makers can utilize to break down the walls of silence that surround the problem of violence against

children, and craft practical and implementable recommendations on how to address the problem. Pinheiro (2005) has noted that breaking the silence does not mean compiling shocking stories, but requires continuous efforts to understand the root causes of violence, the factors that allow it to occur and, most importantly, to find effective ways to adequately prevent and respond to this violence, when it occurs.

Method

Operational definitions:

The major methodological issue confronting research in this field is that of an appropriate definition of what constitutes child abuse, and how it is perceived by health workers and the general population (Haugaard & Emery, 1989; Holden, 2003; Pierce & Bolzalek, 2004), which affects the comparability of results. To avoid this problem, Finkelhor and Korbin (1988) have articulated a definition that seeks to be applicable across cultures, and that is our operational definition. Accordingly, we defined child abuse as that portion of harm to children that results from human action that is proscribed, proximate and preventable. They suggested that a number of other dimensions, such as degree of social sanction or social censure can affect the likelihood that a given harm will be regarded as child abuse. In line with this, we accept the operational definition of sexual abuse used for the Moroccan study (Mehichi et al 2004), namely, sexual contact imposed on a child whose development is still, from the emotional, cognitive and maturity point of view, lacking.

We focused on three types of abuse: physical, psychological and sexual, and assessed these phenomena from the background of the above operational definitions, using a modification of the questionnaires by John Briere and Marsha Runtz (1988), and MacMillan, Fleming, Trocme, Boyle, et al (1997). Details of the modification are outlined below.

Instruments:

The following self-rated questionnaires were used to assess the subjects:

1. Assessment for psychological abuse: in past years: 7 items each with relation to mother, father, and others. The response options were Likert-type: never, once a year, 2-5 times a year, 6-10 times a year, more than 10 times a year.
2. Assessment for psychological abuse: in the past 12 months: 7 items each with relation to mother, father, and others. Response options as above.
3. Assessment for physical abuse: in past years: 4 items each with relation to mother, father, and others. Response options as above.
4. Assessment for physical abuse: in the past 12 months: 4 items each with relation to mother, father, and others. Response options as above.
5. Assessment for sexual abuse: life time: 4 items. Response options: yes/no
6. Modified WHOQOL-Bref to suit circumstance of the subjects: 26 items
7. Rosenberg's self-esteem scale: 10 items

8. A total of 13 items for anxiety and depression symptoms taken from Trauma Symptoms Checklist for Children, by John Briere (1996)

9. Socio-demographic questionnaire: 12 items, including nationality, governorate, family characteristics, quality of relationship between the parents

10. List of difficulties being encountered as result of problems highlighted in the questionnaire, as well as unmet need for psychological assistance: 5 items

Modifications of the questionnaires

1. Assessment for physical, psychological and sexual abuse, by John Briere and Marsha Runtz (1988). The psychological abuse aspect of the questionnaire was modified as follows, to suit the circumstance of our subjects: (a). Instead of using the phrase «..when you were 14 or younger..», we asked our subjects to relate the presence of the items to: «..as much as you can remember..». In other words, we tried to assess life-time prevalence, as at the time of study; (b) To assess past- year prevalence, the subjects were requested to relate the items to the past year only. (c). In order to take care of the extended family nature of the Kuwaiti culture and the usual presence of house helpers in homes, we included the category of others (e.g., other relatives, friends and house helpers)

2. Physical abuse: The items seemed rather repetitive and in our estimation, could be difficult for the subjects to distinguish. Hence, (a) we changed «hit you really hard» to «push you hard»; (b) we changed «punch you» to «pull your hair»; (c) we changed «kick you» to «hit you with objects, such as the traditional male hair band (uqal), belt or stick». In addition, as in the case of psychological abuse, we requested that subjects make the assessment for life-time and past year prevalence, and assess the contribution of others, besides the categories of father and mother.

3. Sexual abuse: we modified the following items from MacMillan, Fleming, Trocme, Boyle, et al (1997): (a) The general instruction was modified to read as follows: «As far as you can remember, did any adult ever do any of these things to you against your will». (b) (i) Deliberately exposed themselves to you more than once to attract your attention». (iii) Touched the sex parts of your body to arouse you». (c) We added the following item: «If any of these happened, please state the person who did it». (Tick as many persons as involved): Father, mother, brother, sister, relatives, house helpers)

4. Some items of the WHOQOL -Bref were modified to make them suitable to the circumstances of adolescents in this culture: (a) Item 12, on money: «How satisfied are you with the money available in your family for your care»; (b) Item 18: «How satisfied are you with your ability to do your school work»; (c) Item 21: «How satisfied are you with your sexual feelings»; (d) Item 24: «How satisfied are you with access to health services, such as hospital, and psychological services»; (e) Item 25: «How satisfied are you with the transport facilities available to you».

5. For psychological distress, we chose designated items for anxiety, depression and anger, from Trauma Symptom Checklist for Children, by Briere (1996). The following items were chosen: (a) Anxiety: Item 2: Feeling afraid something sad might happen; Item 15: Getting scared all of a sudden and don't know why; Item 41: worrying about things; Item 32: feeling nervous or jumpy inside; (b) Depression: Item 7: feeling lonely; Item 9: feeling sad or unhappy; Item 28: feeling like I did something wrong; Item 42: feeling like nobody likes me; Item 52: was modified, because of the sanctions by the Islamic culture on suicide to read : Wishing I were dead. (c) Anger: Item 19: Wanting to yell at people; Item 16: getting mad and can't calm down; Item 21: wanting to hurt other people; Item 22: Feeling like I hate people.

Ethical approval: The proposal was submitted to the Ministry of Education for approval. Thereafter, the school principals were approached for approval.

Subjects:

With the cooperation of officials in the Ministry of Education, we selected 36 government secondary schools in the six governorates by random sampling. The study involved students in class on the days of study in class years 10-12 in the senior sections of secondary schools, and the three classes in the credit hours system schools (Muqararat). Our sampling framework was aimed at obtaining an equal number of boys and girls in each of the governorates. In order to adequately represent the ages of the students - as in a list provided by the Ministry of Education - we randomly selected two classes each from class years 10 and 11, as well as one class in year 12. From the Muqararat schools, we randomly selected 50 students from each of three class years.

The students were evaluated in class, and all the members of the chosen classes were requested to participate, after the objectives of the study had been explained to them.

In each school, the school psychologist of the same gender as the students explained the contents of the questionnaire to the students in detail, and they were requested to complete it anonymously. The psychologists were visibly in class while the questionnaires were being completed, to help students who had difficulty with aspects of the questionnaire.

Pilot testing of the questionnaire:

Before the commencement of the study, the questionnaire was translated into Arabic by the method of back-translation. The research team critically examined it for validity of the contents. Thereafter, the modified version as detailed above was pilot tested among students, who were not part of the main study. A class each of 30 boys and 30 girls were requested to complete the questionnaire for this exercise. At this stage, we examined how much the students understood the items of the questionnaire and how long it took them to complete it. Based on their responses, the questionnaire was modified to produce a final version.

We conducted a test-retest reliability exercise for the final questionnaire by requesting 55 students to complete it a second time, four weeks later.

Data analysis:

Data were analyzed by SPSS version 11/12. Frequency counts were used to examine the distribution of the variables. Association between categorical data was analyzed by chi-square tests. Significant differences between groups for continuous variables were assessed by t-tests and one-way ANOVA for normally distributed data, and by Mann-Whitney U test (MU) and Kruskal-Walis' test for non-normally distributed data. The contribution of covariates to group differences in QOL, abuse scores, self-esteem and anxiety/depression scores was assessed by analysis of covariance (ANCOVA). Predictors of abuse, QOL, self-esteem and anxiety/depression were assessed by multiple regression and logistic regression. In view of the high internal consistency (reliability) indices of abuse scores computed by summing the Likert-type scale item scores, we used the following as indices of abuse: mother psychological abuse total score, father psychological abuse total score, others' psychological abuse total score, each for past years and the past 12 months. Similarly, we computed the mother physical abuse total score, father physical abuse total score, and others' physical abuse total score, each for past years, and the past 12 months. The QOL domain scores followed the recommendations of the WHO, whereby the 26 items are grouped into a 6 domain model, a 4 -domain model, and a general facet on health and QOL (sum of the item on overall QOL and satisfaction with general health). The self-esteem scores were summed up to generate the total self-esteem score. The 13 items on psychic distress were dichotomized into 7 items for anxiety and 6 items for depression.

Hypotheses:

Data analysis was guided by the following hypotheses:

1. The students are predominantly satisfied with their circumstances of life, and have high levels of self-esteem, with low prevalence levels of anxiety and depression. This was assessed by frequency counts.

2. Physical, psychological and sexual abuse are prevalent at a modest level. This was assessed by simple frequency counts

3. QOL, self-esteem, and anxiety/depression are related. Boys have higher QOL and self-esteem scores, while girls have higher anxiety/depression. There is no significant relationship between QOL and self-esteem on the one hand, and age, sibling size, characteristics of family, and the quality of relationship between the parents. This was assessed by t-tests and one-way analysis of variance (one -way ANOVA)

4. Physical and psychological abuse are more common among boys, while sexual abuse is more common among the girls. Gender differences in psychological and physical abuse were assessed by MU tests, using total scores for psychological and physical abuse, for abuse by mother, father, and others, in past years and in the past 12 months. Gender differences in sexual abuse were assessed by chi-square tests.

5. Child abuse is associated with parental disharmony, size of family and socio-economic characteristics of the family. This was assessed by Kruskal -Walis' chi-square test, using total scores for psychological and physical abuse, for abuse by mother, father, and others, in past years and in the past 12 months.

6. Students with child abuse have poorer subjective QOL, self-esteem, and mental health. This was assessed by Spearman's correlation.

7. There are no consistent predictors of child abuse. This was assessed by multiple regression and logistic regression.

8. The dimensions that will emerge from factor analysis will be similar to the WHO's domains. The items of the self-esteem scale and anxiety and depression will not mingle with the WHOQOL items in factor analysis.

Results:

The results are presented in five parts. The first part is about the reliability indices of the questionnaire for the students involved in the test-retest exercise, as well as the entire 4467 responders. The second part highlights the frequency of all the variables, to address the first and second objectives of the study, and the first and second hypotheses. The third part concerns the third objective/third hypothesis, highlighting the correlates and predictors of QOL and self-esteem, independent of child abuse indices. The fourth part highlights the correlates and predictors of child abuse, in order to address the fourth and fifth objectives, as well as hypotheses 4-7. The fifth part deals with factor analysis of the WHOQOL-Bref, self-esteem, anxiety and depression items.

PART A:

Reliability indices: Tables 1 & 2:

Table 1 shows that, for the students who participated in the test-retest exercise, with the exception of the item on someone touching sexual parts of the students for sexual arousal, the reliability indices of the child abuse questionnaires were mostly very high, and reached standard threshold for statistical significance. In particular, the high intra-class correlation coefficient for the test-retest data was reassuring, as it shows that the students took the exercise very seriously and made reliable responses. Similarly, Table 2 shows that there was a very high internal consistency for the responses of the entire cohort of 4467 subjects.

In view of this finding, we suggest that the rest of the results as detailed below are true reflections of the child abuse situation among the adolescents involved in this study.

PART B:

Socio-demographic characteristics of the 4467 students: Table 3:

We have studied a representative sample of adolescents (mean age 16.9, SD 1.2 yrs) in Kuwaiti government senior secondary schools, with a uniform spread of the governorates (averagely 16.7% from each governorate) and gender (48.6% boys Vs 51.4% girls), who predominantly hailed from fairly large, stable and harmonious family homes (83.1% rated parental relationship as good/excellent; 85.1 of parents lived together, with average sibling size of 6.3), with fathers gainfully employed (over two -thirds of fathers were actively employed). Out of 4442 who indicated their nationality, Kuwaiti nationals constituted 88.1% (3915) of the sample, the bedoons were 1.6% (69), students from other Gulf states were 5.5% (243), while those from all other countries constituted 4.8% (215) of the sample.

Frequency of indices of satisfaction with life circumstances (subjective QOL), child abuse, self-esteem and psychic distress: Tables 4-10:

Frequency of WHOQOL-Bref items: Table 4:

In keeping with their stable, supportive and affluent material environment, about two-thirds rated their quality of life and health as good/excellent, felt no need for treatment, and were satisfied with their social relationships, condition of place of living, safety, access to health service and availability of money. However, only a bare majority felt that life was enjoyable and meaningful, and most were dissatisfied with the opportunities they had for leisure activities. In keeping with the later levels of dissatisfaction, a vast majority admitted having negative feelings often.

Frequency of physical and psychological abuse by parents & others in past years and past 12 months: Tables 5 & 6:

Averagely, in past years, 11.2% (range 4.8 - 20.7), 9.7% (range 4.4 -18.8) and 10.7% (range 7.5 -14.4) reported that for 2-5 times in the year, they experienced psychological abuse by mother, father and others, respectively. Similarly, averagely, 17.6% (range 7.9 - 32.7), 14.6% (range 8.2 - 25.3) and 17.6% (range 12.6 -23.4) reported that for over 6 times in the year, they experienced psychological abuse by mother, father and others, respectively.

Also, averagely in past years, 2.9% (range 1.8-4.1), 3.3% (range 1.5-4.1) and 4.4% (range 2.6-7.0) reported that they experienced physical abuse 2-5 times in the year, by mother, father and others, respectively. Similarly, in past years, 3.4% (range 2.4-4.4), 5.3% (range 3.0-6.3) and 5.8% (range 4.8-7.7), reported that they experienced physical abuse over 6 times in the year by mother, father, and others, respectively.

Frequency of sexual abuse: Table 7:

On the whole, 8.6% of the students claimed that someone had sexually attacked them, while 5.9% reported that someone had threatened to have sex with them.

Frequency of anxiety/depressive symptoms: Table 8:

An average of 36.5% students (range 16.2-51.2) admitted having anxiety/depressive symptoms sometimes, while an average of 21.1% (range 8.3-34.6) experienced these symptoms most often/all the time. In particular, 19.4% had death wishes sometimes, while 18.3% admitted having this symptom most often/ all the time.

Frequency of items of self- esteem: Table 9:

The students strongly endorsed items of self-esteem, with over 80% of them agreeing with the following: being satisfied with themselves, having good qualities, being able to do things as others, feeling worthy like others, and having a positive opinion of the self. But over a third felt they were worthless, and a quarter felt proud of themselves.

Frequency of psychosocial difficulties and disability: Table 10:

About a third variously admitted that they were experiencing difficulties as a result of problems highlighted in the questionnaires, that the problems had adversely affected their studies and their ability capacity for social relationships, while just over one-tenth expressed unmet need for psychosocial assistance

Trends in the mean scores of QOL domains, psychological and physical abuse scores, self-esteem and anxiety and depression, by gender and age group: Tables 11-18.

In Tables 11-18, we have attempted to present the mean values of the above variables for categories of ages of boys and girls, corrected for socio-demographic and family characteristics.

After controlling for nationality, father alive/dead, quality of the relationship between the parents, marital status of the parents, and sibling order, the following trends emerged. There was a consistent trend for QOL to decrease with age for all the domains of QOL, for the boys and girls. On the other hand, there was a trend for scores on psychological and physical abuse to increase with age of student. Similarly, anxiety and depression scores tended to increase with age.

PART C:

CORRELATES OF SUBJECTIVE QUALITY OF LIFE AND SELF-ESTEEM

Association of age with QOL (Table 19):

As Table 19 shows, the correlation between age and all the domains of QOL was negative. But the correlations were rather very low. Using one -way ANOVA, the relationship became better clarified, such that those aged 14-15 had higher scores than those aged 16-17, who in turn had higher scores than those aged 18-19, while those aged 20-23 had the least scores. The details for each domain are as follows:

- General facet: Age group: 14-15/16-17> Age group 20-23; Age group 18-19 > Age group 20-23 ($F = 13.5$, $df = 3/4429$, $P = 0.000$)

- 6-domain physical health: 14-15/16-17 > Age group 20-23; Age group 18-19>Age group 20-23 (F = 19.4, df = 3/4377, P = 0.000)

- 6-domain psychological health: Age groups 14-15/16-17/18-19 > Age group 20-23 (F =10.7, df = 3/4312, P = 0.000)

- Independence: Age groups 14 -15/16-17 > Age groups 18-19/20 -23 (F = 29.8, df = 3/4275, P = 0.000)

- Social relations: Age group 14-15 >Age group 20-23 (F = 4.8, df = 3/4250, P = 0.003)

- Environment: Age groups 14-15/16-17 >Age groups 18-19/20-23 (F = 21.3, df = 3/4199, P = 0.000)

- Spiritual: Age group 14-15 > Age group 20-23 (F = 3.1, df = 3/4399, P = 0.03)

Association of gender with domains of QOL: Table 20:

As Table 20 shows, the boys had significantly higher QOL than the girls in all the domains of QOL (t ranged from 4.4 to 11.6, df = 4454, P = 0.000)

Differences in QOL for mother alive/not alive Table 21: significant differences only for: general facet (t = 2.37, df = 4420, P = 0.018); physical health (t = 3.47, df = 4366, P = 0.001).

Differences in QOL for marital status of parents: students with parents married had significantly higher QOL for all domains (t ranged from 2.3 to 7.5; df 4291, P mostly 0.000).

Differences in QOL for occupation of father:

- general facet: high skill> unemployed/private business = medium skill/low skilled worker (F = 4.5, df = 4/3947, P = 0.001)

- 6-domain physical: NS

- 6- domain psychological: high skill > unemployed/private/low skill = medium skill (F = 6.7, df = 4/3848, P = 0.000)

- Independence: high skill > unemployed/private business = medium skill/low skill (F = 5.2, df = 4/3805, P 0.000)

- Social relations: high skill > private business = medium skill/low skilled/ unemployed (F = 2.5, df = 4/3791, P = 0.04)

- Environment: high skill > medium skill/private business/low skilled/ unemployed (F = 11.8, df = 4/3743, P = 0.000)

- Spiritual: high skill > medium skill/private business = low skilled/unemployed (F = 4.1, df = 4/3920, P = 0.003)

Differences in QOL for occupation of mother:

6-domain psychological: high skill > low skill work = medium skill/unemployed (F = 2.4, df = 3/4031, P = 0.05).

Impact of the relationship between the parents on the QOL of students:

In all domains, the QOL of the students showed a clear step-ladder approach, whereby QOL improved sequentially, with the poorest QOL experienced by children from homes where the parents had weak relationship, followed by those whose parents had fair relationship, then those with parents' relationship regarded as good, while those whose parents had excellent relationship had highest QOL (P = 0.000).

- General facet: Parents' relationship excellent ' parents' relationship good ' parents' relationship fair ' parents' relationship weak (F ranged from 91 to 343, df = 3/4292, P = 0.000).

Impact of the students' sibling rank in the family:

QOL tended to decrease with sibling order (i.e., the eldest child tended to have higher QOL domain scores; dichotomized into 1st child/2nd -4th/5th child and above), but this trend reached significance for only the following domains: 6-domain physical (1st ' 5th and above = 2nd to 4th; F = 8.1, df = 2/4336, P = 0.000)

- Independence: 1st > 5th and above = 2nd to 4th; F = 5.2, df = 2/4234, P = 0.006

- Environment: 1st > 5th and above = 2nd to 4th; F = 4.1, df = 2/4164, P = 0.017

Impact of family size/ number of children in the family on QOL:

There was a tendency (except for spiritual domain), for the QOL to diminish with number of children in the home. This tendency reached significance for the following domains:

- 6-domain physical : Siblings 1-4 > siblings 8 -36 = siblings 5-7; F = 10.1, df = 2/4283, P = 0.000

- Independence: Siblings 1-4 > siblings 8 -36 = siblings 5-7; F = 6.9, df = 2/4185, P = 0.001

- Environment: Siblings 1-4 > siblings 8 -36 = siblings 5-7; F = 10.5, df = 2/4112, P = 0.000

Association of QOL with the students' governorate:

There was a trend for lower QOL scores among the students from Jahra, and higher QOL among those from Mubarak Al-Kabeer, in all the domains. This trend reached significance in all the domains, except the spiritual.

- General facet: Mubarak Al-Kabeer > Al-Jahra = Farwania/Hawali/Al-Asimah/ Ahmadi (F = 3.4, df = 5/4450, P = 0.005)

- 6-domain physical health: Hawali/Mubarak Al-Kabeer > Ahmadi/Al-Asima/Jahra; Farwania = Mubarak Al-Kabeer/Ahmadi/Al-Asima/Jahra (F = 8.3, df = 5/4396, P = 0.000)
- 6-domain psychological: Mubarak Al-Kabeer/Farwania > Jahra; Farwania = Hawali/Al-Asima/Ahmadi (F = 4.53, df = 5/4330, P = 0.000)
- Independence: Hawali > Jahra (F = 3.4, df = 5/4293, P = 0.004)
- Social relations: Mubarak Al- Kabeer > Jahra/Farwania (F = 4.18, df = 5/4267, P = 0.001)
- Environment: Mubarak Al-Kabeer/Al-Asima/Hawali/Farwania > Jahra (F = 4.9, df = 5/4217, P = 0.000).

Association between QOL and nationality (categories of Kuwait/bedoon/other Gulf states/all other nationalities):

The general trend was that students of other nationalities had the highest scores, followed by Kuwaitis, then those from other Gulf states, while the bedoon students had the least scores. This trend reached significance for the following domains

- General facet: All other nationalities/Kuwaitis > bedoon (F = 5.7, df = 3/4427, P = 0.001).
- 6-domain physical health: All other nationals > bedoon (F = 2.6, df = 3/4374, P = 0.05)
- 6-domain psychological health : All other nationals/Kuwaitis > bedoon (F = 4.1, df = 3/4308, P = 0.007)
- Independence: All other nationals > bedoon (F = 31.9, df = 3/4272, P = 0.006)
- Environment: Kuwaitis/all other nationals > bedoon (F = 20.8, df = 3/4197, P

= 0.000)

Association between student admitting having a problem and QOL

In all the domains of QOL, students who said they had no problems had significantly higher QOL scores than those who admitted having problems; and of those with problems, the ones who said their problem could be solved by relatives/friends, had significantly higher QOL than those who perceived the severity of their problems as needing help from psychologists/medical doctors and receiving it than those who need help but were not receiving it.

- General facet: Students who had no problems > those who needed help only from relatives/friends > those who needed help from doctors/ psychologists/those who need help but not receiving it (F = 209.2, df = 3/4204, P = 0.000).

- 6-domain physical health: Students had no problems > those who needed help

only from relatives/friends > those who needed help from doctors/ psychologists> those who need help but not receiving it (F = 113.3, df = 3/4164, P = 0.000)

- 6-domain psychological health: Students who had no problems > those who needed help only from relatives/friends > those who needed help from doctors/ psychologists and receiving it > those who need help but not receiving it (F = 237.0, df = 3/4102, P = 0.000)

- Independence: Students who had no problems > those who needed help only from relatives/friends > those who needed help from doctors/ psychologists and receiving it/those who needed help but not receiving it (F = 139.6, df = 3/4069, P = 0.000)

- Social relations: Students had no problems > those who needed help only from relatives/friends > those who needed help from doctors/ psychologists and receiving it/those who needed help but not receiving it (F = 102, df = 3/4044, P = 0.000)

- Environment: Students who had no problems > those who needed help only from relatives/friends > those who needed help from doctors/ psychologists and receiving it > those who need help but not receiving it (F = 238.8, df = 3/4003, P = 0.000)

- Spiritual: Students had no problems > those who needed help only from relatives/friends > those who needed help from doctors/psychologists/ those who need help but not receiving it (F = 136.2, df = 3/4179, P = 0.000)

Association between perceived effectiveness of help received and QOL

Of those who admitted having problems, there was a tendency for those who felt that the help they received had been effective, to have a higher QOL than those who said that that the help received was not effective. This trend reached statistical significance for the following domains

- General facet: Students who perceived help received as being effective > those who were not sure about effectiveness of help/ those who perceived help as not effective (F = 18.9, df = 2/3786, P = 0.000)

- 6-domain psychological: Students who perceived help received as being effective > those who were not sure about effectiveness of help/ those who perceived help as not effective (F = 18.4, df =2/3687, P = 0.000)

- Social relations: Students who perceived help received as being effective > those who were not sure about effectiveness of help/ those who perceived help as not effective (F = 12.5, df = 2/3647, P = 0.000)

- Environment: Students who perceived help received as being effective > those who were not sure about effectiveness of help/ those who perceived help as not effective (F = 15.3, df = 2/3604, P = 0.000)

- Spiritual: Students who perceived help received as being effective > those who were not sure about effectiveness of help/ those who perceived help as not effective (F = 21.9, df = 2/3762, P = 0.000).

Gender differences in self- esteem scores:

The boys had significantly higher self-esteem scores (30.7, SD 4.5) than the girls (30.1, SD 4.7, t = 4.0, df = 4203, P = 0.000)

Gender differences in anxiety and depression scores:

The girls had significantly higher scores for anxiety scores (13.9, SD 3.4, Vs 12.9, SD 3.9; t = 8.8, df = 4203, P = 0.000), and depression scores (11.5, SD 3.7, Vs 10.4, SD 3.4, t = 9.6, df = 4231, P = 0.000) than the boys.

Association between nationality and self-esteem, anxiety and depression scores

The bedoon students had the least scores for self-esteem (P ' 0.05), and the highest scores for anxiety (compared with Kuwaitis/other Gulf states/all other nationalities: F = 6.0, df = 3/4178, P = 0.000), and depression (compared with Kuwaitis/all other nationalities : F = 3.9, df = 3/4206, P = 0.008).

Association between child's self-esteem and parent's marital status

Students whose parents were married had significantly higher self-esteem scores (30.5, SD, 4.6), compared with those whose parents were divorced (29.6, SD 5.4; t = 2.9, df = 4046, P = 0.004).

Association between child's anxiety and depression scores and parent's marital status

Students whose parents were divorced had significantly higher anxiety (14.5, SD 4.3) and depression (12.2, SD 4.3) scores, than those whose parents were married (anxiety :13.3, SD; depression : 10.9, SD 3.5; t = 4.9 & 6.1, for anxiety and depression, respectively, df = 4051, P = 0.000).

Association between self-esteem and student experiencing difficulties:

Students who denied experiencing problems had significantly higher self-esteem scores than those who admitted having problems (31.5, SD 4.2, Vs 28.4, SD 4.8) (t = 21.7, df = 4053, P = 0.000).

Association between anxiety and depression scores and student experiencing difficulty:

Students who admitted experiencing problems had significantly higher anxiety (15.5, SD 4.0, Vs 12.3, SD 3.2) and depression (13.0, SD 3.8, Vs 9.9, SD 2.9) scores, than those who denied having such problems (t = 26.8 & 29.2, for anxiety and depresssion, respectively, df = 4088, P = 0.000).

Association between self-esteem and student experiencing problems with his/her studies:

Students who denied experiencing problems with their studies had significantly higher self-esteem scores than those who admitted having problems with their studies (31.6, SD 4.1, Vs 28.4, SD 4.8) (t = 22.2, df = 3911, P = 0.000).

Association between anxiety and depression scores and student experiencing problems with his/her studies:

Students who admitted experiencing problems with their studies had significantly higher anxiety (15.4, SD 4.0, Vs 12.2, SD 3.2) and depression (12.9, SD 3.9, Vs 9.8, SD 2.8) scores, than those who denied having such problems (t = 27.3 & 29.9, for anxiety and depresssion, respectively, df = 3939, P = 0.000).

Association between self-esteem and student experiencing difficulty in relating with friends/family:

Students who denied experiencing problems in social relationships had significantly higher self-esteem scores than those who admitted having such problems (31.3, SD 4.2, Vs 28.2, SD 4.8) (t = 20.7, df = 3914, P = 0.000).

Association between anxiety and depression scores and student experiencing difficulty in relating with friends/family:

Students who admitted experiencing problems in social relationships had significantly higher anxiety (15.5, SD 4.1, Vs 12.5, SD 3.4) and depression (13.4, SD 3.8, Vs 9.9, SD 2.9) scores, than those who denied having such problems (t = 23.9 & 30.7, for anxiety and depression, respectively, df = 3940, P = 0.000).

Association between self-esteem and student's perception of need for help:

Students who denied need for help had significantly higher self-esteem scores than those who admitted needing help to solve their problems. Their was a consistent pattern, whereby those who denied need for help had higher self-esteem scores than those who believed that their problems could be solved by relatives/ friends, who in turn scored higher than those who said they needed help from doctors/psychologists and receiving the help; while the least score was by those who felt they needed the help of doctors/psychologists, but were not receiving the help (F = 176.1, df = 3/4003, P = 0.000).

Association between anxiety and depression scores and student's need for help:

Students who admitted needing help to solve their problems had significantly higher anxiety and depression scores, than those who denied needing help to solve their problems. Their was a consistent pattern, whereby those who denied need for help had lesser anxiety and depression scores than those who believed that their problems could be solved by relatives/friends, who in turn scored lower than those who said they needed help from doctors/psychologists and receiving the help; while the highest score was by those who felt they needed the help of doctors/psychologists, but were not receiving the help (F = 260.6 & 338.6, for anxiety and depression, respectively, P = 0.000).

Association between self-esteem and student's perception of effectiveness of help received:

Students who felt that the help they were receiving for their problems was effective, had significantly higher self-esteem scores than those who believed that the help they received was not effective. (F = 20.8, df = 2/3594, P = 0.000).

Association between anxiety and depression scores and student's perception of effectiveness of help received:

Students who felt that the help they received was not effective to solve their problems had significantly higher anxiety and depression scores, than those who believed that the help they received was effective to solve their problems. (F = 19.9 & 20.7, for anxiety and depression, respectively, df = 2/3651, P = 0.000).

COVARIATE ANALYSIS - ANCOVA (including option of Bonferoni correction for multiple testing):

To control for the impact of various factors on gender/age, etc differences in QOL, as well as self-esteem, anxiety and depression scores

Differences in QOL domain scores after covariate analysis: controlling for the influence of gender, father being alive/dead, occupation of father, marital status of parents, sibling size, quality of relationship between the parents, and nationality.

Age differences in QOL domain scores

- General facet health & QOL: After correcting for the influence of the above variables, the score for the younger students remained significantly higher than those of the older students (F = 8.2, P = 0.000). However, of the covariates, the most significant impact on QOL was the quality of the relationship between the parents (F = 744, P = 0.000), while the marital status of the parents (F = 4.7, P = 0.03) and sibling size (F = 4.4, P = 0.04), played moderate roles.
- 4-domain physical health: After correcting for the influence of the above variables, the score for the younger students remained significantly higher than those of the older students (F = 21.9, P = 0.000), despite the highly significant impact of the quality of the relationship between the parents (F = 299, P = 0.000), sibling size (F = 15.3, P = 0.000), and gender (F = 21.8, P = 0.000). Results were similar for the 6-domain model, and independence domain
- 4-domain psychological health: After correcting for the influence of the above variables, the score for the younger students remained significantly higher than those of the older students (F = 6.9, P = 0.000), despite the highly significant impact of the quality of the relationship between the parents (F = 661, P = 0.000), and gender (F = 72.1, P = 0.000). Results were similar for 6-domain model.
- Social relations: After correcting for the above variables, the age differences in QOL were no longer significant (P = 0.1). Rather, it appeared that the main de-

terminants of differences in QOL, from the perspective of social relations were as follows: quality of the relationship between the parents (F = 271, P = 0.000), nationality (F = 11.2, P = 0.001), and gender (F = 7.8, P = 0.005).

- Environment domain: After correcting for the influence of the above variables, the score for the younger students remained significantly higher than those of the older students (F = 11.7, P = 0.000), despite the highly significant impact of the quality of the relationship between the parents (F = 859, P = 0.000), nationality (F = 25.9, P = 0.000), sibling size (F = 36.2, P = 0.000), marital status of parents (F = 6.9, P = 0.000), father being alive (F = 7.9, P = 0.005), and gender (F = 18.8, P = 0.000).

- Spiritual domain: After correcting for the above variables, the age differences in QOL were no longer significant (P = 0.09). Rather, it appeared that the main determinants of differences in QOL, from the perspective of social relations were as follows: quality of the relationship between the parents (F = 388.9, P = 0.000), and gender (F = 50.3, P = 0.000).

Gender differences in QOL domain scores and self-esteem scores:

- General facet health & QOL: After correcting for the influence of the above covariates, the gender difference in general facet health & QOL, just failed to reach significance (F = 3.3, P = 0.07). It appears that the differences were mainly attributable to the influence of differences in the perceived quality of parental relationship (F = 714.5, P = 0.000), and age (F = 25.2, P = 0.000).

- Gender differences in QOL remained highly significant (P = 0.000), for the following domains of QOL: 6-domain physical health, 6-domain psychological health, environment, spiritual, and 4-domain physical/psychological (F ranged from 15.2 to 61.6).

- But the gender differences were moderate for independence (F = 4.8, P = 0.029) and social relations (F = 7.3, P = 0.000).

- However, the perceived quality of the relationship between the parents was a highly significant covariate in all the domains of QOL (F ranged from 172.4 to 679.8, P = 0.000).

- Age was also a significant covariate for all the domains of QOL (F ranged from 8.4 to 62.8, P mostly 0.000).

- Father alive/ not alive was a significant covariate (F = 5.9, P = 0.015), only for the environment domain.

- Marital status of parents was a significant covariate only for social relations domain (F = 6.1, P = 0.013)

- Sibling size was a significant covariate for 6-domain physical health (F = 8.9, P = 0.003), independence (F = 9.3, P = 0.002), environment domain (F = 22.3, P =

0.000), and 4-domain physical health (F = 11.5, P = 0.001).

- Nationality was a significant covariate for: social relations (F = 9.1, P = 0.003), environment (F = 23.2, P = 0.000)

- Occupation of father was a significant covariate for environment (F = 6.5, P = 0.01).

Self-esteem: the gender difference in scores became moderate (F = 4.3, P = 0.038), while the impact of perceived quality of relationship between the parents was very high (F = 210.7, P = 0.000), and the impact of father's occupation was moderate (F = 5.7, P = 0.017)

Predictors of QOL Table 22:

We did multiple (step-wise) regression analysis, with each of the QOL domains as dependent variable, and the following as independent/predictor variables: quality of relationship between the parents, age, sibling size, scores on self-esteem, anxiety/depression and need for psychological help:

The quality of relationship between the parents was a significant predictor of all the domains of QOL. For instance, it was the second most important predictor of general facet on health and QOL (accounting for 5.8% of the variance, Beta = 0.22, T = 15.6, P = 0.000). This is in line with the role of this variable as a highly significant covariate in the ANCOVA operations.

PART D: CORRELATES OF CHILD ABUSE

Gender differences in psychological and physical abuse in past years and past 12 months:

There were highly significant gender differences in the pattern of psychological abuses reported for past years and the past 12 months.

While the girls reported significantly higher psychological abuse from their mothers (8.2, SD 6.2, Vs 5.5, SD 6.2; t = 12.3, df = 3929, P = 0.000), and others (7.9, SD 8.2, Vs 5.5, SD 7.2; t = 8.9, df = 3027, P = 0.000), the boys reported more psychological abuse from their fathers (6.9, SD 7.2, Vs 4.9, SD 6.4; t = 8.6, df = 3786, P = 0.000). The same pattern of abuse was reported in the past 12 months.

For physical abuse, a similar pattern was reported, such that, in past years, while the girls experienced significantly more physical abuses from their mothers (1.1, SD 2.6, Vs 0.83, SD 2.4; t = 3.1, df = 4143, P = 0.000) and others (1.6, SD3.3, Vs 1.4, SD 3.1; t = 2.1, df = 3135, P = 0.000), the boys reportedly experienced more physical abuse from their fathers (1.8, SD 3.6, Vs 0.84, SD 2.5; t = 9.9, df = 3990, P = 0.000). The same trend was reported for physical abuse in the past 12 months.

Association between father being alive and psychological and physical abuse

Regarding psychological abuse in the past years, those whose fathers were alive reported significantly more of such abuses from their fathers (6.1, SD 6.9, Vs 1.8, SD 4.9; t = 8.2, df = 3779, P = 0.000), while those whose fathers were not alive, reported significantly more abuses from others (9. 3, SD 8.4, Vs 6.6, SD 7.8; t = 5.1, df = 3019, P = 0.000). A similar pattern of psychological abuse was reported in the past 12 months. There was no significant trend from the perspective of the mother.

Regarding physical abuse in the past years, a similar trend was noted as for psychological abuse. Hence, the boys whose fathers were alive reported more physical abuse from their fathers (t = 3.1, df = 3983, P = 0.002), while those whose fathers were not alive, reported more physical abuse from others (t = 3.6, df = 3127, P = 0.000). The same trend was evident in the past 12 months, and there was no significant trend from the perspective of the mother.

Association of mother being alive and psychological and physical abuse:

The only significant associations between mother being alive or dead and indices of abuse, related to psychological abuse by mother in the past years, in the past 12 months, and psychological abuse by others in past years

- Mother psychological abuse in past years and past 12 months: those whose mothers were alive reported significantly more psychological abuse by their mothers, compared with those whose mothers were not alive (t = 3.8, df = 3903, P = 0.000)

- Others psychological abuse past years: Students whose mothers were not alive, reported significantly more psychological abuse from others in past years, compared with those whose mothers were alive (t = 2.7, df = 3002, P = 0.007).

Association between marital status of parents and child psychological and physical abuse

- Students whose parents were divorced had highly significant tendency to report more psychological and physical abuse in past years and in the past 12 months, by mothers, fathers and others (using t-testt ranged from 2.4 to 4.6, df ranged from 2845 to 3999, P mostly 0.000). However, using Mann -Whitney U -test, this trend reached significance for only the following

- Mother psychological and physical abuse, past years and past 12 months(MW U ranged from 384811 to 427358, Z ranged from 2.6 to 4.8, P ranged from 0.001 - 0.000)

- Physical abuse by others in past years and past 12 months (MW U = 252289 & 229662, ZA = 2.6 & 3.3, P = 0.01 & 0.001).

Association between occupation of father and child psychological and physical abuse:

The only significant associations between occupation of father and psychological and physical abuse were for psychological and physical abuse by others in past years, and physical abuse by mother in past years

- Psychological abuse from others in past years and past 12 months: Students whose fathers were unemployed, reported significantly higher psychological abuse from others, compared with those whose fathers were employed in high skill work (F = 6.4, df = 4/2660, P = 0.000) (KW X2 = 25.9, df = 4, P = 0.000)

- Physical abuse from mother in past years: Students whose fathers were privately employed, reported significantly higher physical abuse from their mothers in the past years, compared with children whose fathers were unemployed (F = 2.9, df = 4/3680, P = 0.02) (KW X2 = 10.6, df = 4, P = 0.03).

- Physical abuse from others in past years: Students whose fathers were privately employed reported significantly higher physical abuse by others, compared with those whose fathers were employed in high skill work (F = 3.4, df = 4/2757, P = 0.009) (KW X2 = 13.9, df = 4, P = 0.007).

Association between occupation of mother and child psychological and physical abuse:

The significant association between occupation of mother and child psychological and physical abuse were for:

- Psychological abuse by mother in past years: Students whose mothers were engaged in low skill work, reported significantly higher psychological abuse from their mothers in past years, compared with children whose mothers unemployed (F = 6.7, df = 3/3672, P = 0.000)(KW X2 = 8.5, df = 4, P = 0.08)

- Psychological abuse by father in past years: students whose mothers were engaged in high skill work, reported significantly more psychological abuse from their fathers in past years, compared with those whose mothers were unemployed (F = 13.3, df = 3/3534, P = 0.000) (KW X2 = 20.7, df = 4, P = 0.000)

- Psychological abuse by father in past 12 months: Those whose mothers were engaged in medium skill work, reported significantly higher psychological abuse from their fathers in the past 12 months, compared with students whose mothers were unemployed (F = 7.3, df = 3/3514, P = 0.000) (KW X2 = 19.6, df = 4, P = 0.001)

- Physical abuse by mother in past years: Students whose mothers were engaged in high skill work, reported significantly higher physical abuse from their mothers in past years, compared with those whose mothers were unemployed (F = 4.4, df = 3/3870, P = 0.004) (KW X2 = 10.6, df = 4, P = 0.03)

- Physical abuse by father in past 12 months: Students whose mothers were engaged in medium skill work, reported significantly more physical abuse by their fathers

in the past 12 months, compared with those whose mothers were unemployed (F = 4.9, df = 3/3673, P = 0.002) (KW X2 = 14.1, df = 4, P = 0.007)

Association between relationship between the parents and child psychological and physical abuse in past years and past 12 months, by mothers, fathers and others:

There was a highly significant tendency for psychological and physical abuse to decrease with increasing perception of the relationship between parents from weak and fair, through good, to excellent. The psychological and physical abuse scores showed a step-ladder pattern, such that the highest abuse was reported by those for whom the parental relationship was perceived as weak, while the lowest abuse scores were experienced by those for whom parental relationship was reported as excellent (F ranged from 42.5 to 117, df 3/3839, P = 0. 000) (KW X2 ranged from 89.8 to 259.8, df = 3, P =0.000).

Association between sibling rank and child psychological and physical abuse

There was a clear pattern of association between category of sibling order (categorized as 1st / 2nd - 4th/ 5th and above child) and indices of abuse. While there was a highly significant tendency for 1st born children to be abused by their parents, compared with the younger children (F ranged from 3.1 to 23.1, df = 2/3872, P mostly 0.000); there was another significant trend for the youngest child (5th and above) to be abused by others, compared with the older children (F ranged from 9.2 to 19.9, df = 2/2988, P = 0.000).

Association between age group (categories of 14-15/ 16-17/ 18-19/ 20-23) and child psychological and physical abuse:

Using ANOVA, there was consistent significant relationship between age group and indices of psychological and physical abuse. Generally speaking, the scores on indices of abuse increased sequentially with age

- (Using one -way ANOVA), with the exception of physical abuse by others in the past 12 months, there was a highly significant tendency for students aged 20-23 to report more psychological and physical abuse by their parents and others, compared with their younger siblings (F ranged from 2.2 to 7.6, df = 3/3905, P mostly 0.02). But using Kruskal -Wali's chi-square, this tendency reached significance only for psychological abuse by father in past years (KW X2 = 14.4, df = 3, P = 0.002).

Association between governorate and psychological and physical abuse

The highest scores for abuse were most frequently reported by students from the Al-Asimah (Capital governorate), while the least scores were reported by students from Mubarak Al-Kabeer governorate

- Students from Al-Asimah had significantly higher abuse scores than those from Mubarak Al-Kabeer, for the following indices of abuse: psychological and physical abuse by mother in past years, psychological abuse by mother in past 12 months; father psychological and physical abuse in past years, father psychological abuse past 12 months.

- Students from Jahra had significantly higher abuse scores than those from Mubarak Al-Kabeer for the following indices:

Physical abuse by others in past years; and physical abuse by father in past 12 months (F ranged from 2.5 to 8.1, df = 5/3925, P ranged from 0.03 to 0.000) (KW X2 ranged from 13.8 to 58.5, df = 5, P ranged from 0.02 to 0.000).

Association between nationality and psychological and physical abuse (categories of Kuwait/bedoon/other Gulf states/all other nationalities)

Students from all other nationalities had a tendency to report higher abuse scores (compared with Kuwaitis/ bedoon/other Gulf states). This trend reached significance for the following:

- Father psychological abuse past years: All other nationalities > bedoon/Kuwaitis/ other gulf states (F = 9.6, df = 3/3762, P = 0.000).

- Father psychological abuse past 12 months: All other nationalities>bedoon/Kuwaitis (F = 7.8, df = 3/3749, P = 0.000)

- Others physical abuse past years: Other Gulf states > All other nationalities/Kuwaitis (F = 6.7, df = 3/3112, P = 0.000)

Association between students' experience of difficulties and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

- There was a highly significant relationship between experience of difficulties and scores on indices of psychological and physical abuse. Consistently, the students who perceived themselves as experiencing difficulties, scored significantly much more highly in indices of psychological and physical abuse, by the parents and others, in past years and in the past 12 months, compared with students who denied having difficulties (M-W U ranged from 1064382 to 834867, Z ranged from 9.9 to 14.2, P = 0.000) (by t-test: t ranged from 10.6 to 19.9, df = 3775, P = 0.000)

- E.g., Mother psychological abuse: Yes, experiencing difficulty, mean = 9.9, SD 8.2; No difficulty, mean = 5.5, SD = 5.6.

Association between students' experience of disability in studies and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

- There was a highly significant relationship between experience of disability in studies and scores on indices of psychological and physical abuse. Consistently, the students who perceived themselves as experiencing disability in their studies, scored significantly much more highly in indices of psychological and physical abuse, by the parents and others, in past years and in the past 12 months, compared with students who denied having difficulties (M-W U ranged from

10704555 to 828178, Z ranged from 9.8 to 14.1, P = 0.000) (by t-test: t ranged from 11.9 to 17.1, df = 3635, P = 0.000).

Association between student's experience of disability in relating with others and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

There was a highly significant relationship between experience of difficulty in relating with others and scores on indices of psychological and physical abuse. Consistently, the students who perceived themselves as experiencing difficulty in relating with others, scored significantly much more highly in indices of psychological and physical abuse, by the parents and others, in past years and in the past 12 months, compared with students who denied having such difficulties (M-W U ranged from 1213231 to 962492, Z ranged from 8.7 to 16.0, P = 0.000) (by t-test: t ranged from 11.2 to 19.6, df = 3638, P = 0.000).

Association between studentse xperience of someone deliberately exposing themselves in order to attract the student sexually and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

There was a highly significant relationship between experience of someone deliberately exposing themselves in order to attract the student sexually and scores on indices of psychological and physical abuse. Consistently, the students who perceived themselves as having had this experience, scored significantly much more highly in indices of psychological and physical abuse, by the parents and others, in past years and in the past 12 months, compared with students who denied having such experience (M-W U ranged from 496368 to 918994, Z ranged from 6.1 to 9.6, P = 0.000) (by t-test: t ranged from 7.2 to 9.9, df = 3906, P = 0.000).

Association between experience of someone sexually attacking the student/ someone threatening to have sex with the student/ someone touching student's sexual parts for sexual arousal and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

There was a highly significant relationship between experience of unwanted sexual contact and scores on indices of psychological and physical abuse. Consistently, the students who admitted having had any of these experiences, scored significantly much more highly in indices of psychological and physical abuse, by the parents and others, in past years and in the past 12 months, compared with students who denied having such experiences (M-W U ranged from 174281 to 357431, Z ranged from 5.9 to 8.0, P = 0.000) (by t-test: t ranged from 7.4 to 11.8, df = 3905, P = 0.000).

Association between student's perception of effectiveness of assistance being received to solve problems, and report of psychological and physical abuse by parents and others in past years and past 12 months:

There was a consistent trend for those who perceived that the assistance they were receiving to solve their problems, was adequate to score less on indices of child abuse, com-

pared with those who perceived that the assistance that they were receiving was inadequate. This trend reached significance only in the case of physical abuse by father in past years (KW X2 = 10.5, df = 2, P = 0.005).

Association between student admitting having a problem and scores on indices of psychological and physical abuse by parents and others in past years and past 12 months:

In all the indices of child psychological and physical abuse, students who denied having any problems, had significantly lower scores than those who admitted having problems; and of those with problems, the ones who said their problem could be solved by relatives/ friends, had significantly lower abuse scores than those who perceived the severity of their problems as needing help from psychologists/medical doctors and receiving it ' those who need help but not receiving it (KW X2 ranged from 113.8 to 300.2, df = 3, P = 0.000).

Differences in QOL domain scores between students who admitted various forms of sexual abuse and those who denied such experience(having been sexually attacked; someone having deliberately touched sexual parts to arouse the student; someone threatened to have sex with the student; someone deliberately exposed themselves in order to sexually attract the student):

- Having experienced sexual attack: In all the domains of QOL, those who denied the experience of being sexually attacked, had highly significantly higher QOL scores than those who admitted having the experience (t ranged from 6.4 to 11.3, df = 4405, P = 0.000)

- Having experienced someone deliberately touching the sexual parts of the student to sexually attract the student: In all the domains of QOL, those who denied the experience of sexual parts being touched for sexual arousal, had highly significantly higher QOL scores than those who admitted having the experience(t ranged from 5.9 to 10.6, df = 4405, P = 0.000)

- Having experienced someone threatening to have sex with the student: In all the domains of QOL, those who denied the experience of being threatened with sex, had highly significantly higher QOL scores than those who admitted having the experience(t ranged from 6.6 to 9.8, df = 4405, P = 0.000)

- Having experienced someone deliberately exposing themselves to sexually attract the student: In all the domains of QOL, those who denied the experience of someone deliberately exposing themselves to sexually attract the student, had highly significantly higher QOL scores than those who admitted having the experience (t ranged from 2.7 to 7.3, df = 4405, P mostly 0.000)

Association between self-esteem and student experiencing being sexually attacked by someone:

Students who denied having ever been sexually attacked had significantly higher self-esteem scores than those who admitted having this experience (30.6, SD 4.5, Vs 28.2, SD 5.1) (t = 9.3, df = 4169, P = 0.000).

Association between anxiety and depression scores and student experiencing being sexually attacked by someone:

Students who admitted experiencing having been sexually attacked had significantly higher anxiety (15.7, SD 4.6, Vs 13.2, SD 3.8) and depression (13.1, SD 4.2, Vs 10.8, SD 3.5) scores, than those who denied having such problems (t = 11.7 & 12.1, for anxiety and depression, respectively, df = 4182, P = 0.000).

Association between self-esteem/ anxiety /depression scores and student experiencing someone touching their sexual part for sexual arousal/someone threatening to have sex with student/someone deliberately exposing themselves to sexually attract the student:

The same pattern was noted for sexual attack, whereby, students who admitted having any of the above experiences, had significantly lower self-esteem scores, and higher anxiety and depression scores, than those who denied such experiences (t ranged from 6.6 to 12.6, df = 4171, P = 0.000).

ANCOVA analysis (including option of Bonferoni correction): Gender differences in psychological and physical abuse by parents and others in past years and past 12 months:

- After controlling for the influence of the covariates, the following gender differences in indices of abuse remained highly significant: mother psychological abuse past years/past 12 months, father psychological abuse past years/past 12 months, others psychological abuse past years/ past 12 months, and father physical abuse past 12 months (F ranged from 23.4 to 70.7, P = 0.000).

- Gender differences in child abuse indices were moderate for the following: mother physical abuse past years, and past 12 months (F = 4.3, P = 0.038).

- The most significant covariate for all indices of abuse was the student's perceived quality of the relationship between parents (F ranged from 51.1 to 121.2, P = 0.000).

- Age was a moderately significant covariate for the following: mother psychological abuse past years (F = 5.8, P = 0.016), father psychological abuse past years/ past 12 months (F = 9.9, P = 0.002), and father physical abuse past years (F = 4.6, P = 0.03).

- Father alive/dead was a highly significant covariate for the following: father psychological abuse past years/past 12 months (F = 14.6, P = 0.000)

- Marital status of parents was a moderately significant covariate for the following: father psychological abuse past years/father physical abuse past years (F = 4.2, P = 0.04).

- Sibling size was a highly significant covariate for the following: others psychological abuse past years/past 12 months (F = 18.0, P = 0.000), others physical abuse past years/past 12 months (F = 15.9, P = 0.000).

- Nationality was a significant covariate for the following: mother psychological abuse past years/past 12 months (F = 7.6, P = 0.006), mother physical abuse (F = 8.5, P = 0.000), and others physical abuse past 12 months (F = 7.1, P = 0.008).
- Occupation of father was a significant covariate for the following: father psychological abuse past years (F = 5.1, P = 0.025), others psychological abuse past years/past 12 months (F = 4.1, P = 0.04).

Impact of covariates on QOL (general facet on health & QOL) among students who experienced being sexually attacked:

After controlling for the influence of covariates (gender, father alive/dead, occupation of father, marital status of parents, sibling size, relationship between parents, nationality, age, self-esteem, anxiety and depression), the difference in QOL (general facet on health & QOL), between those who had been sexually attacked and those who denied the experience, became moderate, but significant (F = 4.8, P = 0.029). The factors with the highest impact on QOL from the perspective of the child who experienced sexual attack were, perceived quality of parental relationship (F = 268, P = 0.000), followed by self-esteem (F = 202.5, P = 0.000), depression (F = 101, P = 0.000),, anxiety (F = 56.7, P = 0.000), and age (F = 15.9, P = 0.000). The other covariates did not play significant roles. This means that, a child who has been sexually attacked has a good chance of adjusting to the experience (as evidenced by maintaining subjective QOL), if the relationship between the parents is perceived as being at least good, combined with the child having a high self-esteem score, low anxiety and depression scores, and being older.

Impact of covariates on other domains of QOL (psychological/physical/social relations) among students who experienced being sexually attacked:

After controlling for the influence of the above covariates, the highly significant differences in QOL domain scores (for psychological/physical/social relations domains), between those who had been sexually attacked and those who denied the experience, earlier noted in the uncorrected data, were no longer significant (F = 0.11, 0.76, and 0.03, respectively, for psychological/physical/social relations domains, P ' 0.05). The highly significant covariates (or protective factors) remained: perception of the quality of relationship between the parents as excellent, high self-esteem score, as well as low anxiety and depression scores (P = 0.000).

Impact of covariates on environment domain of QOL among students who experienced being sexually attacked:

Although differences in environment domain of QOL, between those who had been sexually attacked and those who denied the experience, remained highly significant after controlling for the influence of covariates (F = 10.7, P = 0.000), the highly significant moderating impact was still evident for the above noted protective factors, namely: quality of parental relationship (F = 352, P = 0.000), high self-esteem score (F = 274, P = 0.000), low anxiety (F = 12.6, P = 0.000), and depression (F = 155.3, P = 0.000) scores.

Impact of covariates on psychological/physical abuse scores among students who experienced being sexually attacked:

After controlling for the influence of the above covariates, the highly significant differences in psychological and physical abuse scores by parents and others, in the past years and past 12 months, between those who had been sexually attacked and those who denied the experience, earlier noted in the uncorrected data, remained highly significant (F ranged from 17.9 to 50.9, P = 0.000), the highly significant moderating impact was still evident for the above noted protective factors, namely: quality of parental relationship (F ranged from 15.5 to 88.9, P = 0.000), high self-esteem score (F = ranged from 16.0 to 41.9, P = 0.000), low anxiety (F ranged from 22.4 to 57.5, P = 0.000), and depression scores (F ranged from 20.8 to 84.5, P = 0.000 for most; except for father/others physical abuse past years with F = 7.1, & 7.8, respectively, P = 0.008).

Impact of covariates on self-esteem among students who experienced being sexually attacked:

After controlling for the influence of the above covariates, the highly significant difference in self-esteem scores, between those who had been sexually attacked and those who denied the experience, noted in the uncorrected data, became moderate (F = 5.0, P = 0.025). But the highly significant moderating impact was still evident for the above noted protective factors, namely: quality of parental relationship (F = 37.1, P = 0.000), low anxiety (F = 8.1, P = 0.005), and depression (F = 487.3, P = 0.000) scores.

Impact of covariates on depression among students who experienced being sexually attacked:

After controlling for the influence of the above covariates, the highly significant difference in depression scores, between those who had been sexually attacked and those who denied the experience, noted in the uncorrected data, became moderate (F = 11.7, P = 0.001). But the highly significant moderating impact was still evident for the above noted protective factors, namely: quality of parental relationship (F = 83.4, P = 0.000), self-esteem (F = 487.3, P = 0.000), and low anxiety(F = 2128.2, P = 0.000) scores.

Impact of covariates on anxiety among students who experienced being sexually attacked:

After controlling for the influence of the above covariates, the highly significant difference in anxiety scores, between those who had been sexually attacked and those who denied the experience, noted in the uncorrected data, became moderate (F = 10.0, P = 0.002). But the highly significant moderating impact of quality of parental relationship, noted for other variables, was no longer evident (P ' 0.05). Rather, the important covariates were self-esteem (F = 8.1, P = 0.005), and depression (F = 2128.2, P = 0.000) scores.

THE ROLE OF PSYCHOLOGICAL, PHYSICAL AND SEXUAL ABUSE IN PREDICTING QOL, SELF-ESTEEM, ANXIETY AND DEPRESSION: TABLES 23-26:

To assess the impact of child abuse on QOL in the context of all the other significant covariates, we did multiple (step-wise) regression analysis, with the general facet on health and QOL as dependent variable and the following as independent variables: Self- esteem, anxiety total score, depression total score, mother psychological abuse past years, father psychological abuse past years, others psychological abuse past years, mother physical abuse past years, father physical abuse past years, others physical abuse past years, experience of being sexually attacked, experience of being threatened with sex, quality of relationship between parents, age of student, number of siblings, experiencing difficulties, needing psychological help, effectiveness of treatment, experiencing difficulty in studies because of problems, disability in relating with friends/family. We performed similar assessments for self-esteem, anxiety and depression.

Table 23 shows that, the quality of relationship between the parents remained a highly significant predictor of QOL (accounting for 5.5% of the variance, Beta = 0.18, P = 0.000). However, while the following indices of abuse were significant predictors, their relationship with QOL was all in the negative direction and of very small magnitude, each accounting for < 0.05% of the variance, and Beta ranged from 0.05 to 0.07: father psychological abuse past years, others psychological abuse past years, mother physical and psychological abuse past years.

Table 24 shows that, in the case of self-esteem, the quality of parental relationship was no longer a significant predictor. However, psychological abuse by others in past years (0.8% of variance, Beta = - 0.08) and physical abuse by mother in past 12 months (0.5% of variance, Beta = - 0.08), though they were significant predictors, their impact on self-esteem was minor and the relationship was in the negative direction.

Table 25 shows that, in the case of depression, psychological abuse by mother in past years (0.5% of variance, Beta = 0.06) and psychological abuse by others in past years (0.3% of variance, Beta = 0.06), though with minor impact, were more important predictors than the quality of parental relationship (0.2% of variance, Beta = - 0.05).

Table 26 shows that, for anxiety, among the significant predictors were: psychological abuse by mother in past years (1.3% of variance, Beta = 0.09), psychological abuse by others in past years (0.7% of variance, Beta = 0.08), and psychological abuse by father in past years (0.2% variance, Beta = 0.04).

PART E:

FACTOR ANALYSIS:

Our first factor analysis operation was done using the 26 items of the WHOQOL-Bref by the method of principal component analysis with varimax rotation for factors with Eigen value above one. As Table 27 shows, five factors emerged, accounting for 51.9% of the variance. According to the rules for this analysis, the factors are judged to be stable because the first factor accounted for over 20% of the variance (actually 32.9%), while four of the

factors each consisted of at least four items. The first four factors have some resemblance to the WHO 4 -domain model for the following reasons: Factor 1, was largely made up of items constituting WHO's psychological health domain (but mixed with two items from WHO's environment domain). Factor 2 was largely made up of items from WHO's physical health domain (but mixed with an item each from WHO's environment and psychological domains). Factor 3 appears to be a tighter definition of WHO's environment domain. Factor 4 consists of all the three items of WHO's social relations domain, plus two from WHO's psychological domain. Our Factor 5 could be called, «freedom from illness», as it consists of the items on freedom from pain and need for treatment.

- When the analysis was done using 24 items of the WHOQOL-Bref, (i.e., excluding the items on overall QOL and health) as recommended by the WHOQOL group, exactly the same factors resulted
- When the analysis was done by combining the WHOQOL-Bref with the ten items of Rosenberg's Self-esteem Scale, seven factors resulted; but the items of the two questionnaires did not really mix. Rather, they clustered up in separate factors as follows: Factors 1 to 3 were the usual WHOQOL -Bref factors as in Table 27 (except that one item of self-esteem - self-satisfaction - was included in Factor 3); Factor 4 was constituted by five items of self-esteem; Factor 5 was the WHOQOL's Factor 4, as above; Factor 6 was constituted by four items of the self-esteem scale; Factor 7 was the fifth factor of the WHOQOL as above
- There was a similar result when the analysis was done by combining the items of the Whoqol-Bref, self-esteem and anxiety and depression. Nine factors resulted, with the items of each questionnaire staying clearly apart. The five factors of the WHOQOL, the two factors of self-esteem, one factor for anxiety and another for depression.

DISCUSSION:

Representativeness of sample and reliability of data:

We obtained completed questionnaires from 4467 students, aged 16.9 (SD 1.2) years (range 14 -23). Our respondents were evenly spread across the governorates (about 16% of students were from schools located in each of six governorates), and fairly similar number of boys (48.6%) and girls (51.4%). In addition, the overwhelming proportion of Kuwaiti nationals (87.3%) and marginal number of bedoons (1.6%) is reflective of the proportion of nationalities in government senior secondary schools as documented in the official Ministry of Education register. Hence it is reasonable to conclude that our sampling method was successful in selecting a representative sample of students in government senior secondary schools.

We were very keen to ensure the reliability of the responses of the students, because of the sensitive nature of the items of the questionnaire, and the usual impression that the students may either not understand the items of the questionnaire, or may not take the exercise seriously enough. Tables 1 and 2 show that our attempts to address these issues were highly

successful, resulting in high indices of reliability (internal consistency) for the questionnaires. All aspects of the questionnaire achieved the required threshold Cronbach's alpha score of 3 0.7 (our results were mostly of the order of 0.9). In particular, the reliability indices of the test-retest analysis (average measure intra-class correlation coefficient - ICC) for the students who completed the questionnaires twice in a 4 -week interval, were all above the standard threshold score of 3 0.7. In addition, the reliability indices of the items we used to compute psychological and physical abuse (mother, father, others', psychological /physical abuse) were very high, indicating the soundness of our method of analysis.

In view of the above, it is reasonable to conclude that our sample, instruments, and method of analysis had sufficient scientific rigor to deal with the objectives of the study.

Some of the obstacles to understanding and dealing with child abuse in conservative societies are social taboos on the matter, and children's fear of the social consequences of admitting the truth of the experience (Sharma & Gupta, 2004). However, the high reliability indices of the responses in our test-retest exercise is an indication that, if given the chance in a neutral, non-threatening atmosphere, affected adolescents in this society can be relied upon to express their views on the matter. The implication for the school authorities and counselors is that, attempts to deal with the issue of child abuse among the affected and vulnerable or at risk child should take place privately and in a non-threatening atmosphere.

Frequency of items of QOL:

Considering the pattern of responses on the WHOQOL -Bref, a pertinent question for policy makers in the education sector is: what can society do about youths who admit that their material needs are well catered for, but harbor negative feelings, as they do not have a sense of enjoyment in an atmosphere where they feel that they have limited opportunities for leisure activities. In the field of psychology, this is known as social double binding, and it needs to be addressed

Frequency of items of child abuse:

We found that, averagely, 17.6%, 14.6%, and 17.6% reported that for over 6 times in the year, they experienced psychological abuse by mother, father and others, respectively. Similarly, in past years, 3.4%, 5.3%, and 5.8% students, reported that they experienced physical abuse over 6 times in the year by mother, father, and others, respectively. On the other hand, 8.6% of the students claimed that someone had sexually attacked them.

The interesting thing, from the point of view of a conservative society where the children feel safe, is that the level of sexual abuse reported here is occurring at all, and that the students reported impact on their psychosocial functioning. As a rationale for the study, we had noted that there was a tendency for abuses of children to be denied in Kuwaiti official reports.

Correlates of QOL and child abuse:

The significant relationship between QOL and many of the variables is an indication that QOL is sensitive to a host of psychosocial indicators of personal distress and family disharmony.

One interesting finding was in the case of gender differences in QOL and self-esteem, where we found that in ANCOVA, having controlled for the impact of multiple variables, the uncorrected gender differences were either annulled (e.g., for general facet on health & QOL), or diminished for several domains of QOL and self-esteem. One interpretation of this finding is that gender differences in QOL are not as natural as they appear; rather, it seems that nurtural or environment factors have a large role to play in this. One implication is that society has to find a way to make the social environment of the girls to be more promoting of their satisfaction with circumstances of living.

Interestingly, we found that the most significant covariate impacting on gender differences in QOL and self-esteem was the quality of parental relationship. The marital status of the parents was also significant in several areas, though of far less importance than the quality of parental relationship

The child who was psychologically and physically abused was significantly more likely to have experienced sexual abuse. The child who was abused by one parent was significantly more likely to report being abused by the other parent and other people. The scenario that emerged from our results is that: it appears that the abused child is an endangered species, being significantly prone to a host of psychosocial deficiencies and disabilities, including, liability to multiple types of abuse by different persons, diminished QOL and self-esteem, increased levels of anxiety and depression; as well as increased likelihood of family problems, such as parents being divorced and poor quality of parental relationship.

The good news is that, in ANCOVA analysis, where we tried to control for the simultaneous impact of multiple factors, we found that, while the abused child's proness to difficulties remained, the quality of parental relationship seemed to be a strong protective factor that can help the child adjust to the situation. In addition, our multiple regression analysis showed that, child psychological, physical and sexual abuse had relatively minor direct impact on QOL, the more important factors being quality of parental relationship, anxiety, depression and self-esteem. Another good news is that, those who sought help for their problems and judged the help received to be effective, had significantly higher QOL, and self-esteem, and lower scores on anxiety and depression. This implies that intervention measures have strong potential to help the abused child who needs help.

Implications of the findings:

While the possible environmental and personal factors that make a child predisposed to abuse may be difficult for parents to deal with, the quality of parental relationship, self-esteem, and anxiety and depressive symptoms, are indicators of potential importance in helping children and families who have experienced various forms of child abuse.

These findings have implications for the role of public mental health education in promoting marital harmony, and attention to feelings of self-esteem, anxiety and depression among Kuwaiti adolescents, as a tool for primary prevention, and for moderating the impact of child abuse among those who have been exposed to the experience.

Factor analysis:

The results of our factor analysis operations are noteworthy for two reasons. First, the domains of QOL from the WHOQOL-Bref had more similarity with the WHO's 4-domain model, thereby contributing to the international evidence that this model is much more valid and stable across cultures, compared with the 6 -domain model. Second, the fact that the items of the WHOQOL, self-esteem and anxiety and depression did not mix in any of the domains, shows that the concept of subjective QOL is separate and independent from the others, and that it is valid to treat these concepts as distinct measures of psychosocial outcome. There is a controversy in the literature about whether the concept of subjective QOL is sufficiently distinct and independent from related concepts of self-esteem, anxiety and depression (Cummins, 1996; Cummins, Lau & Stokes, 2004).

Importance of our achievements:

1. To our knowledge, we have collected the largest data base in the Arab world to test important hypotheses about child abuse. Hence our results will serve as a benchmark and reference for similar work in the region and for comparison with the situation in other parts of the world.

2. Since we have studied a probability sample (i.e., random sample representative of the national population in this age group), we have now produced a data base to serve as normative national data for Kuwaiti adolescents, in the areas of subjective quality of life, child abuse, self-esteem, and anxiety and depressive symptoms.

3. We have advanced knowledge in this field by using the responses of a large probability sample to assess the relationship of child psychological, physical and sexual abuse on the one hand, with subjective QOL, self-esteem, anxiety, depression, quality of parental relationship, child's psychosocial difficulties and child's unmet need for treatment, on the other hand. This breadth of work is unusual in the literature.

4. The fairly high reliability indices of the child abuse questionnaire, means that we have generated a questionnaire that should be of use for workers in the field of child abuse in the Arab world.

5. We have shown that attention to the quality of relationship between parents, as well as attempts to improve child self-esteem, and deal with anxiety and depression, have the potential to help the child adjust to the impact of abuse and boost child QOL

6. Factor analysis: The results of our factor analysis operations have contributed to resolving the controversy about the domains of QOL and the contribution of indices of self-esteem and anxiety and depression to the definition of the concept of QOL (Cummins, 1996; Cummins, Lau & Stokes, 2004)

Recommendations:

Since our data on the frequency and correlates of child abuse emanated from a large and representative sample of adolescents, and their responses were judged to be reliable, we have achieved our objective to validly and reliably highlight the burden of the problem on society, in a way that can be utilized to make recommendations to policy makers on how to address the problem. The authorities need to have this type of data as a basis for finding effective ways to adequately prevent and respond to this violence when it occurs.

We, therefore, make the following recommendations, based on our data:

1. Prevalence of child abuse in society: Although the students were aged 14-23 years, they were requested to report on their experiences in the past years, and in the past 12 months. In the light of the reliability of their responses, it is reasonable to suggest that, despite the acknowledged supportive nature of society (over two-thirds felt safe in daily life, and were satisfied with social supports) child abuse is prevalent in this country. There is need to acknowledge this fact in order to generate the societal will to take action on it. Accordingly, we recommend that action on child abuse should feature on the list of priority items for child welfare in Kuwait.

2. Risk /protective factors: The most consistent risk factor for child abuse from the family perspective was parental disharmony. From the personal side, the most important factors associated with child abuse were anxiety and depression. The indices for parental disharmony and child anxiety and depression can be fairly easily observed in the home by family members. Hence, we recommend that child welfare programs and public mental health education should incorporate the idea that in situations where there is parental disharmony, the onus is on parents to be vigilant about obvious signals of psychological distress among the children, and to beware about the vulnerability of children to multiple types of abuse from different persons inside and outside the home.

3. Particular vulnerability of girls: Our data showed that girls were consistently disadvantaged in all the indices of psychosocial well-being and child abuse, including the internationally robustly replicated issue of depression. While biological factors may thus be implicated in these findings, the results of our ANCOVA operations showed that nurtural/environmental factors could also be at play. It is therefore important that policy makers should look into how to harmoniously improve the social environment for the girls, so as to lighten their psychic distress and improve their self-esteem and satisfaction with circumstances of living (subjective QOL).

4. Legal and institutional framework for action on child abuse: We found that, on the average, 14.6%-17.6% of students reported psychological abuse by parents and others at least six times per year in the past years; 3.4% - 5.8% reported physical abuse at the same yearly rate; while 8.6% were allegedly sexually assaulted. In comparison with the findings in the literature, we have used a more stringent

criterion or threshold for child abuse, because of the need to eliminate those cases in which the parents may have been attempting to discipline an erring child, as is traditionally accepted in our conservative society. Viewed from this perspective, it is reasonable to suggest that the prevalence of child abuse that we have reported is high, especially from the point of view of a caring, family-oriented society. We suggest that this level of prevalence calls for articulating legal and institutional framework for action on child abuse. From the legal perspective, we recommend that the existing laws on child welfare should be updated to recognize that the problem of child abuse exists, make legal provisions for protecting the child from abuse, prescribe ways for helping the families that are involved in this phenomenon, and specify punishment for adult offenders. From the institutional perspective, we recommend that at least a section of child abuse should be created in child welfare units or departments, with the hope that the section will mature into an independent department or institute in the future. Furthermore, counselors and social workers engaged in family/marriage and child welfare work should emphasize the benefit of parental harmony on the well-being of the child, and the fact that parental harmony is a social base on which the child can draw strength to adjust to many life problems.

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