

# ABSTRACTS OF COMMUNITY HEALTH PROJECTS CONDUCTED BY MEDICAL STUDENTS AT THE KUWAIT UNIVERSITY - YEAR 2001-2002

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## Faculty Of Medicine: Community Medicine Projects - Academic Year 2001-2002

(This is a list of Community Medicine projects completed by the 6th year medical students in partial fulfillment of their graduation requirements. These projects were tutored by the academic staff of the Department of Community Medicine, Faculty of Medicine, Kuwait University. Projects are available for perusal by all interested at the Department of Community Medicine, Faculty of Medicine, Jabriyah, 5th floor, Tel.: 531-9485)

### 1. Blood Pressure and its Correlates among High School Girls in Urban Areas of Kuwait

Yasmeen Ahmad, Manar Al-Khalaf, Ebtihal Al-Habeeb and Alia Sadek

Tutor: Prof. Zoran Radovanovic

**Objectives:** 1-To assess the prevalence of hypertension among high school girls in Kuwait, 2-To assess the prevalence of obesity in the same study group, 3-To compare the relationship between hypertension and obesity, 4-To identify factors associated with high blood pressure among participants in the study.

**Methods:** A cross-sectional study with a multi-stage cluster-sampling scheme was conducted. Five high schools from Hawalli and Capital governorates were randomly selected. Data were collected from **296 girls** using an anonymous self-administered questionnaire. Blood pressure of each respondent was measured twice, using an electronic device. Waist circumference of each girl was measured in centimeters.

**Results:** The prevalence of hypertension (systolic  $\geq 140$ , diastolic  $\geq 90$ ) was 11.1%. A total of 24.8% of the girls were obese (waist size  $\geq 80$  cm). Waist size showed a consistent highly significant correlation with blood pressure ( $p < 0.001$ ). Several factors were analyzed for association with high blood pressure: socioeconomic and psychological factors, dietary habits and physical activity, personal and family history of some chronic diseases, smoking and current corticosteroid therapy. Only satisfaction with body image and low food intake were significantly associated with hypertension ( $p = 0.05$  and  $p = 0.02$ , respectively).

**Conclusion:** Prevalence rates of hypertension and obesity were relatively high for a high school population. Though risk factors other than obesity (smoking, salt intake, etc) were not statistically associated with hypertension, their adverse effect may be apparent later."

### 2. Information Provided by Doctors to General Surgery Patients in Kuwait

Nuha Al-Azmi, Huda Al-Sahhaf, and Ahmad Al-Aqeel

Tutor: Prof. Zoran Radovanovic

**Objectives:** To study the level of information provided to surgery patients before an operation. Also to evaluate the association between personal characteristics of the patients and the amount of knowledge they received before surgery.

**Methods:** The study population consisted of all general surgery patients in five general hospitals in Kuwait, as well as in general surgery wards of Al-Sabah hospital. A self-administered questionnaire was filled by 160 patients. Standard descriptive and analytical statistical techniques were used.

**Results:** More than 40% of the patients responded that they had no information on their upcoming operation before admission. One out of six patients responded that nobody had discussed with them the surgical procedure before intervention. Information provided to patients pre-operatively made more than half of patients less anxious.

**Conclusion:** Most patients obtained some information on the surgical procedure, but for 50% the information was not provided in an understandable way. There is an apparent gap in communication between doctors and patients."

### 3. Risk Factors of Kidney and Ureteric Stones: A Case-Control Study

Nora Al-Moteiri, Dalal Al-Sakhi, Huda Al-Moteiri, and Salma Al-Ajmi

Tutor: Prof. Zoran Radovanovic

**"Objectives:** To identify the risk factors for developing kidney and ureteric stones in the population of Kuwait.

**Methods:** A case-control study was conducted from March 16 to 22, 2002. The respondents were individually matched by age, sex, and nationality. Cases were selected from the lithotripsy center, outpatient and in-patient units of six hospitals, and controls were chosen among in-patients in the hospitals where the respective cases were identified. Data were collected by face-to-face interviews using a specially designed questionnaire.

**Results:** The study showed that family history of renal stone in one or more of first degree relatives, history of gout and UTI, risky occupations (outdoors, manual indoors in hot environment) and time spent outdoors were risk factors for kidney and ureteric stones. This study also showed that dietary habits were not a risk factor for kidney and ureteric stones in the population of Kuwait.

**Conclusion:** Our results imply that prevention of kidney and ureteric stones in Kuwait should be primarily directed to treatment of UTI and gout and adequate fluid intake for people working in a hot environment."

### 4. Pregnancy and Outcome of Advanced Maternal Aged Kuwaiti Women: A Case Control-Study

Manal Al-Za'abi, Noor Al-Meer, and Tahani Al-Baqer

Tutor: Prof. Mohamed A. Moussa

**"Objectives:** To compare Kuwaiti pregnant woman at an advanced age (35 years or more) and women at a younger age with respect to social characteristics, course of pregnancy and delivery mode and outcome.

**Methods:** This was a case-control study which included 70 Kuwaiti women 35 years and above (cases) and 70 women less than 35 years of age who delivered at Maternity, Farwaniya, and Adan hospitals. Data were collected through personal interviews using a specially designed structured questionnaire, which comprised three sections: social characteristics, course of pregnancy, mode and outcome of delivery.

**Results:** Higher proportion of cases' husbands were university educated or above. Thirteen percent of the cases reported history of diabetes mellitus and hypertension, compared to 1.4% only in controls, 24.3% of cases reported  $\geq$  abortions compared to 4.3% in controls. Half of the cases experienced gestational diabetes during their current pregnancy, compared to 15.7% among controls. Also, 41.4% of cases had hypertension, compared to 15.7% in controls, 17.1% of the cases had placenta previa versus 4.3% of the controls, and 11.4% suffered pre-eclampsia versus 4.3% of the controls. A higher proportion (10%) of cases suffered from severe postpartum haemorrhage, compared to only 1.4% of the controls. In addition, 32.9% of the cases delivered low birth weight fetuses, compared to 17.1% in controls. All mentioned proportions were statistically significant.

**Conclusions:** The results of this study showed that pregnant women at an advanced maternal age ( $\geq$  35 years) are at higher risk of having complications during pregnancy and low birth weight, compared with younger women. Besides, cultural and traditional effects are more influential than education with respect to pregnancy of Kuwaiti women at an advanced maternal age"

## 5. Practice of Medical Students in Clinical Teaching Settings

Nawaf Al-Arada, Mohammed Al-Muteiri, Jarah Al-Tubaikh, and Saad Al-Nessafi

Tutor: Prof. Mohamed A Moussa

**Objectives:** To describe the practice of medical students in the clinical years, and assess the association between such practice and their social characteristics, academic performance, and self-esteem.

**Methods:** A cross-sectional study including 220 medical students (89.4% of the total number of the three clinical years) during the academic year 2001-2002. Data were collected through self-administered questionnaires including four sections: social characteristics, determinants for joining medical faculty, practice of clinical teaching, and Rosenberg's self-esteem scale. Students were approached in hospitals and other clinical settings or during afternoon lectures.

**Results:** There was significantly higher academic performance among females compared to males. Reasons for choosing medical education were mostly "Intellectual satisfaction" in females, and "family pressure" and "peers' advice" among males. The extent of satisfaction varied according to the clinical specialty, it was least in surgery rotations. Some negative aspects about clinical teaching were reported, such as variation between instructors, unfairness in instructors' evaluation, lack of facilities for clinical teaching in hospitals, and shortage of time devoted for clinical teaching by instructors.

**Conclusion:** Clinical teaching methods need to be evaluated and modified. This will lead to an improvement in the clinical teaching methods and minimize the existing negative aspects."

## 6. Internet Uses and Associated Psychological Profile among Kuwaiti Senior High School Students

Jassim Al-Barrak, Jassim Al-Abbad, Najlaa' Al-Kharafi, and Noura Al-Omair.

Tutor: Prof. Mohamed A Moussa

**Objective:** To study the association between Internet use and psychological aspects among senior high school students; and to investigate its influence on students' school performance and their relationships with parents and peers.

**Methods:** Cross-sectional sampling survey including 423 Kuwaiti third and fourth grade high school students of both genders (198 males, 225 females), students were randomly selected from four high schools in the Capital governorate. A specially designed self-administered questionnaire was used to collect the data. It included three sections: sociodemographic characteristics, Internet use and psychosocial profile.

**Results:** Internet use among high school students is not affected by age or personal income. However, there was a significant difference between the median duration of using Internet in males (2.5 years) and in females (3 years) ( $p = 0.024$ ). Females reported higher daily average of hours spent on the Internet during the last month (3 hours) than males (2 hours) ( $p < 0.001$ ). Significantly higher proportion of females reported using the Internet for e-mail, while males use it more for pornography. Higher percentage of males (59.1%) reported no negligence of their household chores to spend more time online than females (36.9%) ( $p < 0.001$ ). Significantly higher proportion of females (13.8%) reported fear that life without the Internet becomes empty and joyless than males (6.6%) ( $p = 0.015$ ). There was significant correlation between psychological score and duration of Internet use in years ( $r_s = 0.226$ ,  $p < 0.001$ ), and average daily number of hours spent on the Internet ( $r_s = 0.516$ ,  $p < 0.001$ ). The median psychosocial score in females was significantly higher (30) than in males (27) ( $p < 0.001$ ).

**Conclusion:** Still much needs to be learned and researched regarding Internet use among adolescents. There may be areas of real concern that require good management on the part of educators and parents."

## 7. Experience of Patients Using Fixed Orthodontic Appliances in Kuwait

Maysoon Al-Rushood, Manal Taqi, Najla Al-Jassem, and Maithaa' Al-Kandari

Tutor: Prof. Nasra Shah

**Objectives:** To study the sociodemographic characteristics, and motivation of patients seeking fixed orthodontic appliances; and to investigate their pre-existing knowledge and experience of pain and pain-related side effects; and their compliance with dental hygiene and follow up.

**Methodology:** All patients with fixed orthodontic appliances attending Bneid Al-Gar and Al-Amiri dental centers for follow up visits were targeted as the study population. Data were collected in a face-to-face interview using a structured questionnaire.

**Results:** A total of 204 patients could be contacted, of whom, 194 were successfully interviewed yielding a response rate of 95.1%. Three-fourths were teenagers and more than three-fourths were females. Improving facio-dental appearance was the main motivating factor for seeking treatment (81%). Family members had the greatest influence on patients' decision to get the treatment (46%). Of the 194 patients, 161 (83%) knew they might experience pain before treatment. About 80% of patients reported pain experienced to a large to moderate extent. The adverse outcomes were positively associated with age and male gender ( $P<0.05$ ). Older patients aged 20 years and more were more compliant with the treatment and follow up ( $P<0.01$ ). A large majority of patients (75%) always kept their scheduled appointment, and 84% used special orthodontic brushes. However, 64% rarely or never use the dental floss.

**Conclusion:** Aesthetic reasons were the most important motive to seek treatment. While compliance was generally good, there is a need to emphasize the regular use of the dental floss".

## 8. Bullying amongst Male High School Students in Capital and Jahra Governorates

Aziz Al-Dofairi, Faisal Al-Rashidi, Meshal Al-Maskati, and Nayef Al-Enezi

Tutor: Prof. Ivana Jevremovic

**Objectives:** To assess the prevalence and pattern of bullying among male high school students in Jahra and Capital governorates, and to identify the sociodemographic factors and their relation to bullying.

**Methods:** A total of 405 male high school students in the Capital and Jahra governorates were studied. Data were collected by a self-administered questionnaire. The overall response rate was 96%.

**Results:** The highest prevalence rates, for both Capital and Jahra, were reported for witnessing bullying, 76.5% and 81%, respectively. They were followed by being a victim 53% and 48.8%, respectively. Bullying others had the lowest prevalence rates, 45% and 36.1%, respectively. The overall prevalence rate was the highest for verbal bullying (36.3%).

**Conclusions:** Rates of bullying for the two governorates were similar, and the differences did not have a consistent pattern. Bullying was associated mostly with the following factors: nationality, visits to doctors/psychologists, friendship making, place of bullying and safety in school".

## 9. Trait Anxiety among High School Girls in an Urban Area of Kuwait

Shurook Al-Hawaj, Alaa' Al-Sbea, Abeer Al-Azmi, and Esraa' Amir

Tutor: Prof. Ivana Jevremovic

**Objectives:** To assess the level of trait anxiety among female high school students in an urban area in Kuwait and to study the relationship between the level of trait anxiety and different socio-demographic characteristics.

**Methods:** A retrospective survey was conducted among 243 fourth grade high school girls in the semester system of education of Hawalli governorate. Data were collected by a self-administered questionnaire. The overall response rate was 100%, but 30 incomplete questionnaires were not analyzed.

**Results:** Two-thirds of high school girls were Kuwaitis and 17 years old. The average grade in the previous school year was above 70% for most (69%). A majority thought that it was easy and even very easy to make friends (61%). The great majority (90%) of the students perceived their health as good or excellent. Most of the students (63%) found their parents always available for them. More than half of the students (52%) had emotional problems. Trait-anxiety score ranged from 24 to 72 and showed a normal distribution. The mean anxiety score was 48. Anxiety score and parents' characteristics of the respondents were not significantly related.

**Conclusion:** The mean score for trait anxiety tended to be closer to the high end of the range. Level of trait anxiety was not associated, at a statistically significant level, with most of the socio-demographic characteristics of the respondents. Trait anxiety was directly related to difficulties in friendship making, stressfulness of life, the response of emotional problems, and inversely to grade average in last school year, perception of health and parents' availability".

## 10. Qualities of a Good Physician

Ghadeer Al-Alawi, Haya Al-Towalah, Sharifah Al-Mefleh, and Hadeel Al-Oun

Tutor: Dr. David Robinson

"A number of surveys have described the qualities that patients and members of the general public expect to find in a "good physician" but there is relatively little information concerning the qualities considered important by those who teach and train physicians. Therefore, the objective of this study is to ascertain what qualities are considered important by the academic staff in a medical faculty. To achieve this objective a questionnaire was designed to allow staff members to list up to five unstructured and original statements describing the most important qualities of a good physician. The target population was all 164 academic staff members of the Medical faculty of Kuwait University who were available during the survey period. The survey questionnaire was completed by 118 individuals so that the response rate was 72%. Four independent judges were able to identify a set of unique and specific qualities that could be classified in terms of eight major quality domains. The major quality domains and their percentage endorsement frequencies were: social attitudes and behaviors (70%), personal attributes (70%), personal cognitive abilities (43%), knowledge (37%), social cognitive abilities (32%), long-term self-education (32%), medical skills (21%), and interest in the field (10%). Chi-square tests were carried out to ascertain whether there were any significant differences in the endorsement frequencies due to age differences, sex differences, years of experiences, faculty rank, cultural background, or in terms of status as physician versus non-physician, or clinician versus non-clinician. The results of these tests indicated that the relative endorsement frequencies for the major quality domains in the different subgroups are very similar to those for the whole faculty. The main conclusion to be drawn from these findings is that those who teach and train physicians characterize the "good physician" most frequently in terms of psychological and social qualities. This result is in broad agreement with the result of patients surveys and there are implications for the selection of medical students and for the future development of the medical teaching programs".

## 11. Attitude towards Psychiatric Patients among Governmental Employees

Safeya Al-Abdulla, Laila Al-Sairafy, and Bibi Al-Mazidi

Tutor: Dr. Jaafar Behbehani

**Objectives:** The objectives of this study were: a-To assess attitudes toward psychiatric patients among government employees, b-To measure the knowledge and misconceptions about psychiatric illnesses, c-To identify other socio-cultural factors affecting attitudes towards psychiatric patients.

**Methods:** A multi-stage cluster sampling of 595 respondents employees (203 males and 387 females) was drawn from randomly selected government ministries in the Ministries' Complex. The questionnaire included four categories: sociodemographic data; information about psychiatric disorders perceived causes and manifestations; attitudes towards a psychiatric patient; and information about previous contact with a psychiatric patient.

**Result:** Most respondents had a positive attitude towards psychiatric patients especially those who had previous experience with individuals who had psychiatric disorders. Young and highly educated participants showed more good will. Women tended to have the greatest social distance. The main determinants of social control were women having children, less strict economic status and less religiosity. Media did not have a significant impact on attitude.

**Conclusions:** Results support the hypothesis that the attitude would be influenced by gender, socio-economic status, having children and familiarity with psychiatric patients"

## 12. Changes in Dietary Habits and Opinions Related to the Recent Dead Fish Crisis

Lamyaa' Al-Sarraf, Lujain Al-Reshaid, and Mahinoor Al-Bannay

Tutor: Dr. Abdulwahab Al-Isa

**Objectives:** To assess the impact of the Dead Fish Crisis on the dietary habits of Kuwaiti government employees, focusing on gender differences. In addition, to explore differences between those who stopped, continued, or never consumed fish, irrespective of gender differences. A related objective was to reflect opinions related to the marine environment among the same group.

**Methods:** Both male and female Kuwaiti government employees from the Ministry of Finance, Justice, and Trade in the Ministerial Complex were targeted as the study population. All civil servants present on the job location during the data collection period were invited to participate in the study. Data collection occurred during 15-19 September 2001, using an anonymous self-administered questionnaire.

**Results:** Of the 438 individuals who were contacted at the Ministerial Complex, 400 returned the completed questionnaire, yielding a response rate of 91.3%. There was a change in dietary habits after the Dead Fish Crisis: a drastic decline in fish consumption was seen in both males and females to a similar extent. Of the 400 respondents, 376 (94%) ate fish before the crisis. Of those, 303 (75.5%) stopped after the crisis. There were no significant differences in sociodemographic variables between those who stopped and those who continued to eat fish after the crisis. Opinions of the studied sample regarding the causes and effects of marine pollution differed by gender. Most showed lack of knowledge to the real cause of the Dead Fish Crisis. However, many (82%) were aware that an individual's action might harm the marine environment.

**Conclusion:** Lack of fish consumption, and its subsequent negative implications after the Dead Fish Crisis, raises an important public health concern. Should this crisis not be resolved alternatives to local fish should be made available. Measures should be taken by local authorities to prevent further deterioration in Al-Joon Bay's environment, and to be more prepared in case of recurrence. There is also an urgent need for legislation to control industries that are harming the marine environment"

### 13. Assessing Personality Profiles among Physicians of Different Specialties in Kuwait

Mohammed Al-Suwaidan, Thamer Al-Essa, and Fahad Al-Mutawa

Tutor: Dr. Abdulwahab Al-Isa

**Objectives:** To assess personality traits of physicians in different medical specialties in Kuwait and to correlate them with personality profiles specific to each medical specialty studied.

**Methods:** A hospital-based survey was conducted that included only government hospitals. The research sample included 190 physicians in all hospital ranks. The studied specialties were surgery, pediatrics, obstetrics /gynecology and internal medicine. A questionnaire was designed to assess a physician's personality profile including the parameters of view of leadership, depression, faith in people, and social anxiety.

**Results:** Of the studied pediatricians, 40% reported that their current specialty was not their first choice. Surgery was the preferred alternative specialty choice of most physicians (31.6%) Pediatricians were the most likely to have parents or older siblings as physicians (37.1%). Surgeons were the highest (42.4%) on democratic views of leadership and internists were highest in decision-making views of leadership (42.2%). Pediatricians had the lowest level of depression (48.5%). Obstetricians-gynecologists had the highest faith in people (50%) and internists had the lowest (23.4%). Surgeons had the lowest level of social anxiety (45.5%) while pediatricians had the highest (38.6%). The response rate was 86.4%.

**Conclusion:** Our data supports the hypothesis that physicians of the same specialty share certain personality profiles that are unique to each medical specialty."

### 14. Difference in Physical Activity and Obesity among Male and Female Intermediate School Students in Kuwait

Faisal M. Al-Shallal, Saud A. Al-Subeey, Abdulrazzak M. Al-Anjeri and Khalid A. Al-Enezy

Tutor: Dr. Abdulwahab Al-Isa

**Objectives:** The purpose of this study was to assess the difference in levels of obesity and physical activity between males and females as they relate to other associated factors among intermediate school students.

**Methods:** The intermediate school students in the Capital and Jahra governorates were targeted as a study population. The sampling method followed in the present study was the multi-stage random sampling technique. Data collection occurred during March 2002, by using a self-administered, pre-tested (piloted) questionnaire.

**Results:** In a sample of 264 male intermediate school students, 9.8% were considered overweight and 33.7% were considered obese. In a sample of 205 female intermediate school students, 19% were considered overweight and 11.2% were considered obese. Governorate, number of servants, suffering from obesity, eating between meals, dieting, number of times dieted, practicing sports and practicing a second sport were found to be significantly associated with overweight and obesity in males. Age, governorate, number of siblings, father's occupation, mother's occupation, income, suffering from obesity, dieting, number of times dieted, nutrition program for dieting, and satisfaction of the shape and body image were found to be significantly associated with overweight and obesity in females.

**Conclusion:** This study concluded that overweight and obesity rates among intermediate school students in Kuwait were high. Therefore, it is recommended that studies on larger samples should be conducted to establish population trends and hence to confirm the results. We also recommend that intervention programs should be instituted".

## 15. The Impact of Medical Fees on the Accessibility to Primary Care of Low-Income Workers

Mohammed A. Al-Oun, Abdulaziz A. Al-Adwani, and Nouf S. Al-Maghames.

Tutor: Dr. Salim Adib

**"Background and Objectives:** New realities have forced the government of Kuwait to review its original free-for-all public healthcare approach. In 1999, new regulations came in action whereby non-Kuwaiti residents were now requested to pay user fees for various aspects of care. A cross-sectional survey was conducted to analyze potentially adverse effects of such fees on access to health care for low-income unskilled non-Kuwaiti laborers.

**Methods:** Face-to-face interviews were conducted with a convenient sample of 400 laborers in residential areas where they usually congregate, of whom 91% fulfilled the socio-economic profile of vulnerability targeted for this study.

**Results:** About 80% of the sample reported that their utilization of primary health care (PHC) had decreased due to fees. While 66% of those who needed care but found it too expensive to afford eventually recovered from ailments for which they did not obtain care, 14% were still suffering and 19% were forced to obtain care at higher levels because of their worsening condition. Illiterate laborers perceived the financial obstacle to be more severe than those with some primary education. Compared to younger, better-educated individuals, older and illiterate individuals tended to perceive that the fee for a PHC visit, while too expensive for them, is nevertheless worth the expense, in view of the service obtained.

**Discussion and Conclusion:** Evidence of financial obstacles to health-care access among the most vulnerable strata of society in Kuwait has emerged. A safety net should be established to ensure that health care is not denied to those individuals. Failure to do so constitutes a grave human and ethical violation."

## 16. Birth Intervals and Physical Development among Primary School Boys

Nasser Al-Hajri, Fawaz Al-Abdali, Barjas Al-Moteiri, and Abdulrahman Al-Kandari

Tutor: Dr. Salim Adib

**"Introduction:** This study assessed the effect of birth intervals on the physical development of primary school boys aged about 10 as indicated by the weight-to-height (WTH) ratio, while controlling for the effect of family's socio-economic factors and size.

**Methods:** A cross-sectional study was conducted among students in Jahra and Hawalli districts. Boys younger than nine or older than 11 years were excluded. Height and weight were measured and a questionnaire was sent to the family to be returned the following day.

**Results:** The sample included 319 boys (53% from Jahra) with a mean age of 9.5 years. The average WTH was 0.24 kg/cm, with no significant differences between the two governorates. The average prior birth interval (PBI) was 35.9 months with a median of 31. The average subsequent birth interval (SBI) was 32 months, with a median of 27. PBI was positively associated with WTH ( $p < 0.01$ ), as was age ( $p = 0.023$ ), while family size was negatively correlated ( $p = 0.024$ ). No other variables showed a significant association with WTH.

**Discussion:** The average birth intervals in the study were generally shorter than those found in less traditional societies. Differences may be due to higher preference for natural birth spacing based on breast-feeding and less preference for artificial birth control in Kuwait. Families should be counseled to promote longer birth intervals and reduce family sizes to maximize children's health benefits"

## 17. Determinants of Preventive Dental Visits among Female Primary School Teachers in Kuwait

Somayya El-Syed, Tahani Al-Ansari, Shaymaa' Al-Haddad, and Shaymaa' Al-Faris.

Tutor: Dr. Salim Adib

**Introduction:** The practice of preventive dental visits was measured and the association of this practice with various psycho-social and demographic factors assessed among female primary schoolteachers.

**Methods:** A cross-sectional study was conducted using a random cluster sample design in public primary schools for girls in all five governorates. A structured self-completed questionnaire was used which included data on: socio-demographic variables and relevant attitudes and beliefs regarding preventive dental visits.

**Results:** A total of 460 questionnaires were completed and included in the analysis. About 60% of the sample was obtained from urban areas. The median age of teachers in this group was 32 and their median number of children was three. Of all participants, 46% had never gone to preventive dental visits, while 26% had gone but not on any regular basis. About 70% mentioned their future intention to use preventive dental visits. Higher perceived susceptibility to dental problems, higher dental anxiety and lower perceived efficacy were significantly associated with no or lower past use. Higher anxiety and lower efficacy were significantly associated with no future intention to use preventive visits.

**Discussion and Conclusions:** The importance of dental anxiety as a specific obstacle to past and future preventive dental visits should inspire dentists to do their best to minimize discomfort during procedures. Teachers as important elements in health education of young people have to be targeted by systematic awareness and perception programs, along with provision of special dental services"

## 18. A Comparative Study of Anxiety among Kuwait University Students

Hesham M. Hamoda, Fahad R. Al-Nasser, Abdulla S. Hadi, and Hussam N. Ismael

Tutor: Dr. Anjum Memon

**Objectives:** University can be an anxiety-provoking environment for many students because they are faced with deadlines, high expectations, and career aspirations. High anxiety can affect academic performance and social well-being.

**Methods:** We conducted a cross-sectional survey among students in three faculties at Kuwait University to assess and compare their anxiety levels. The survey included 882 students attending the Faculties of Medicine (n = 324), Administrative Sciences (n = 306) and Sharia (n = 252). Data were collected through an anonymous self-completed questionnaire, which included information on sociodemographic characteristics and perception of health and social well-being. An Arabic version of Spielberger's State-Trait Anxiety Inventory (STAI) was used to assess the level of anxiety.

**Results:** Medical students reported the highest levels of both state and trait anxiety compared to those in Administrative Sciences and Sharia. Medical students were also more likely to describe their life as stressful, were less satisfied with their appearance, had less free time, and did not enjoy studying at home. Among medical students, those in the fifth-year had the lowest anxiety scores. Among other variables, GPA was inversely related to anxiety; female students reported higher trait anxiety than males; and those who had a better perception of health had lower anxiety. Students with little free time as well as those with a lot of free time were more likely to be anxious.

**Conclusions:** Compared with other students, medical students are more likely to experience high anxiety. Educating students about effective management of anxiety provoked by university life may improve their academic performance and psychosocial well-being".

## 19. Knowledge of Asthma among Adult Patients in Kuwait

Eman Al-Haqan, Mashael Bander, Fatma Al-Kandari, and Alanood Al-Ateeq

Tutor: Dr. Anjum Memon (Co-tutor: Nasser Behbehani)

**Objectives:** It has been suggested that morbidity and mortality from asthma can be decreased if patients have adequate knowledge about their disease, particularly their ability to prevent and manage asthma attacks. We conducted a survey among adult asthma patients in Kuwait to assess their knowledge about the disease and to determine if it varies according to personal and sociodemographic variables.

**Methods:** The survey included 225 asthma patients attending the OPD at the Al-Rashid Allergy Centre. Data was collected by a self-administered questionnaire, which included 44 close-ended and 2 open-ended questions concerning the most common symptoms and triggers of asthma.

**Results:** The mean age at diagnosis of asthma was  $25.8 \pm 14.4$  years; and the mean duration of the disease was  $12.4 \pm 12.1$  years. Overall, asthma patients had moderate knowledge about their disease: mean knowledge score = 25 out of 44 (range 12-42). The knowledge score differed significantly according to age, source of information about asthma, area of residence, and duration of the disease. There was no real difference in knowledge according to gender, nationality, and educational level. The patients had relatively high knowledge about the three most common symptoms and triggers of asthma; whereas they had less knowledge about the treatment of the disease.

**Conclusions:** There is a need to initiate education programmes for asthma patients in Kuwait with special emphasis on areas of knowledge concerning the treatment of the disease".

## 20. Screening for Cervical Cancer: A Study of Kuwaiti Women's Knowledge, Attitude and Practice

Abrar Al-Hussaini, Amal Ahmad, and Sara Al-Mutawa

Tutor: Dr. Anjum Memon

**Objectives:** To study the knowledge, attitude, and practice of Kuwaiti women towards cervical cancer screening and to obtain their opinion regarding the introduction of a national cervical cancer screening programme.

**Methods:** A survey was conducted among a sample of 300 ever-married Kuwaiti women visiting the six randomly selected primary health clinics in the Capital governorate. Except for the women with no formal education, the data were collected by a structured self-completed questionnaire.

**Results:** Of the 300 women, about 69% knew about the cervical screening test, and their doctor or nurse was the most common source of this knowledge. Only 48% had done a cervical screening test, although the large majority (87.7%) believed that the test is a reliable method for early detection of cancer. The most common reason for doing the test was gynecological symptoms. About 40% of the women did not have any knowledge about the risk factors and symptoms of cervical cancer. The knowledge and practice of the test was significantly associated with age, but not with educational level. If a national cervical cancer screening programme were initiated by the government, 97% of surveyed women would participate.

**Conclusions:** Compared with women in the developed countries, Kuwaiti women had less knowledge about cervical screening test and cervical cancer and a relatively lower proportion had ever done the test. The findings of our study suggest that there is a need to initiate a comprehensive cervical cancer screening and awareness programme in the country".

## 21. Risk Factors for Gallstone among Kuwaiti Females: A Case-Control Study

Abeer Al-Thaidy, Hanan Youssef, Manal Al-Enezi, and Manar Al-Wehaib

Tutor: Dr. Lukman Thalib

**"Introduction:** Gallstone is one of the most common diseases of the gastrointestinal tract, particularly among adult females. However, there are no reported studies from Kuwait on the prevalence, incidence or related risk factors. Objectives: To identify the risk factors of developing gallstones related to adult Kuwaiti females.

**Methods:** A hospital based case-control study, consisting of 100 adult Kuwaiti female cases having been diagnosed with gallstones pair-matched to 100 controls based on age and hospital.

**Results:** This study showed that several risk factors are associated with the development of gallstones among adult Kuwaiti females. The consumption of bread [OR = 0.20 (0.06-0.061)] and of fresh vegetables and fruits [OR = 0.15 (0.05-0.49)] were strongly associated, while other food items were not. Most of the drinks like coffee, tea [OR = 0.35 (0.16-0.76)], laban, milk [OR = 0.35 (0.02-0.81)], and carbonated drinks [OR = 3.70 (0.60-8.60)] were significantly associated with gallstones. Among the reproductive factors, only the early age at menarche had a positive relation with the development of gallstones [OR = 16 (2.12-12.64)]. Obesity was also one of the important risk factors for developing gallstones (mean BMI of cases =  $30.52 \pm 6.19$ , mean BMI of controls =  $28.46 \pm 4.08$ ). Intake of vitamins [OR = 7.60 (2.27-25.90)] and herbal medicine [OR = 0.39 (0.19-0.76)] were also related to development of gallstones. Having relatives with a history of gallstones had a high positive association with risk of gallstones [OR = 6.52 (2.10-19.90)].

**Conclusion:** Gallstone among Kuwaiti females was shown to be significantly associated with several behavioral risk factors"

## 22. Sheesha Smoking among Kuwait University Male Students

Bader Al-Bader, Hamed Hussain, and Thamer Abdullah

Tutor: Dr. Lukman Thalib

**"Introduction:** Sheesha smoking is a widely established habit in the Arab world where it is viewed as part of the culture and heritage. However, sheesha smoking is hazardous to health, just like cigarette smoking, mainly due to the special kind of tobacco it contains. Nonetheless, very little is known on the prevalence or health effects of smoking sheesha. Therefore, this study is an attempt to investigate the prevalence of, and factors associated with sheesha smoking in Kuwait.

**Objectives:** To estimate the prevalence and factors associated with sheesha smoking among the Kuwait University male students. This study also aimed to explore the reasons behind sheesha smoking and variation between faculties of study, academic performances, and socio-economic levels. Understanding beliefs, attitudes and knowledge about sheesha smoking were further objectives of this research.

**Methodology:** The study was a cross-sectional sample survey. A sample of 400 students representing those enlisted between first and fourth academic years were chosen from four different faculties using a stratified convenient sampling approach. Self-administered questionnaires were used for this survey.

**Results and Discussion:** Overall sheesha smoking prevalence was 25.8%. Of all the students, 9.8% smoked only sheesha, 9.3% smoked only cigarettes, and the majority of the smokers were dual smokers of cigarettes and sheesha. Most of these dual smokers (75%) either started smoking cigarette before or at the same time as sheesha. Smoking patterns varied significantly from faculty to faculty and between different levels of socio-economic and academic performance variables. Smokers reported significantly higher level of health complaints, especially cough, chest pain, and decreased fitness compared to non-smokers. Smoking both cigarette and sheesha showed

significantly severe complaints, compared to smoking one of them alone. The knowledge level of sheesha smoking among the students varied between faculties, where medical and Islamic law studies students showed better understanding which resulted in lower levels of smoking in these two faculties. The lowest level of smoking was found in the faculty of Islamic studies and was associated with the highest percentage of students reporting religion as the main reason for stopping or avoiding smoking.

**Conclusion:** Prevalence of sheesha smoking among the Kuwait University students is comparable to some of the reported studies from elsewhere. It appears that cigarette smoking and sheesha smoking go hand in hand in most cases. Faculty to faculty variations and variations due to other factors could be easily understood"

### 23. Awareness of Risk Factors Related to Congenital Malformations in Kuwait

Afaf Al-Otaibi, Anwar Al-Mutairi, and Modi Al-Mutairi.

Tutor: Dr. Lukman Thalib

**"Introduction:** Congenital malformations are the most common cause of perinatal mortality in Kuwait. However, there are no reported studies from Kuwait on awareness of the risk factors of congenital malformation.

**Objectives:** To assess the level of awareness of the factors related to congenital malformation among Kuwaiti females and to explore the association between socio-demographic factors and the level of awareness.

**Methodology:** A cross-sectional study with a two-stage cluster sampling, consisting of 270 married Kuwaiti females from Hawally and Ahmadi Governorates.

**Results:** Knowledge of risk factors and misconception widely varied among Kuwaiti women. Risk factors such as exposure to x-rays and infections during pregnancy were well known among the females while factors such as young age of mother and vitamin A intake were least known. On the other hand, the commonly prevailing misconceived factors were "being anxious" and using hair dye during pregnancy. Some of these factors vary with some socio-demographic variables such as occupation, education, and governorate.

**Conclusion:** The overall knowledge about congenital malformation among Kuwaiti females was low with lack of awareness of some modifiable risk factors. Some misconceptions that are widely thought to cause congenital malformations were identified. A well planned educational campaign is suggested to improve the awareness of risk factors."

### 24. Factors Affecting Adherence to Diabetes Regimen among Adolescents in Kuwait

Amer Al-Rashid, Abdulrahman Al-Dossary, and Salman N. Salman

Tutor: Dr. Laila Al-Jassem

**"Introduction:** Insulin-dependant diabetes mellitus (IDDM) requires a complex plan of treatment. There are many factors affecting adherence to self-care management of IDDM such as beliefs, knowledge, self-efficacy, educational level and social support.

**Objectives:** Identifying the areas of diabetes regimen which lack adherence among adolescents in Kuwait. Also, identifying factors (barriers) related to non-adherence. Finally, identifying any differences in self-care adherence by demographic variables and some of the disease related factors among adolescents in Kuwait.

**Methods:** This cross-sectional study was carried out on type 1 diabetic adolescents (12-20 years old). A standard questionnaire was used and data were collected through a telephone interview. A sample size of 140 patients was selected from a list provided by three hospitals in Kuwait. The

questionnaire consisted of four sections: Demographic characteristics, disease related information, adherence to diabetes regimen and barriers related to non-adherence.

**Results:** The study showed that insulin injections and doctor visits are the areas of highest adherence to the diabetes regimen, whereas practicing physical exercise, following a recommended diet, blood testing and foot care are the areas of highest non-adherence. More than half of those who said they practice exercise at least three times a week were from a younger age-group (12-14), males, with mothers who had a higher education level (diploma or university). Those who inspected their feet daily were in the older age-group, those with fathers with a higher education level (diploma or university), have had diabetes for more than six years and were worried about diabetes complications. These relationships were found to be statistically significant. Psychosocial factors accounted for most of the barriers related to missing insulin injections, blood testing, or doctor's appointment, and not practicing exercise or following a special diet. Lack of health education was the reason for not adhering to foot care.

**Conclusions:** The most common barriers related to non-adherence to diabetes regimen were psychological, social and health educational factors. Therefore, health education programs should focus on these areas. Future research should examine those barriers in more details."