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Caregiver-Child Mental Health Associations In Peshawar, Pakistan And Kabul, Afghanistan

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Caregiver-Child Mental Health Associations in Peshawar, Pakistan and
Kabul, Afghanistan

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Yale School of Public Health
Epidemiology of Microbial Diseases
Master of Public Health Candidate 2012
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Abstract:

Objective: To assess the impact of caregiver mental health on child mental health in two samples of Afghan families living in Peshawar, Pakistan and Kabul, Afghanistan.

Methods: Using stratified random-sampling in five schools throughout seven refugee camps located in Peshawar, Pakistan, mental health and life events of 319 11-to 16-year old students (n=161 boys, 158 girls) and their caregivers (n=319) were evaluated in 2005 cross-sectional study. Self- and caregiver-rated child mental health (Strengths and Difficulties Questionnaire), depressive (Depression Self-Rating Scale), and posttraumatic stress (Child Revised Impact of Events Scale) symptoms and caregiver mental health (Self-Report Questionnaire) were assessed. Past-year traumatic exposures were also assessed. These data from Peshawar were contrasted against mental health data collected from another cross-sectional sample of 364 11- to 16-year old students (n = 180 boys, 184 girls) and their caregivers (n=364) living in nine school districts of Kabul, Afghanistan in 2006.

Results: Caregiver mental health as measured by SRQ-20 scores was significantly associated with the full spectrum of child mental health outcomes, but more so in Kabul than in Peshawar. Caregiver SRQ-20 scores were also associated with greater child mental health burdens significantly more so in Kabul than in Peshawar. Several gender differences were observed in Peshawar (more boys had PTSD than girls, p-value 0.0231), but in Kabul there were no significant gender differences.

Introduction:

Afghanistan is one of the poorest countries in the world, with the highest infant (165 of 1000) and child (257 of 1000) mortality rates in the world, and a life expectancy at birth of only 45 years.^[1] By comparison, Pakistan ranks far better with a life expectancy at birth of 66 years, and an infant mortality rate of 61 deaths per 1000 live births.^[2] Following the Soviet invasion of Afghanistan in 1979, millions of Afghans fled to neighboring countries Iran and Pakistan.^[3] Throughout the conflict between the People's Democratic Party of Afghanistan and the group known as Islam of the Muslim Brotherhood in the 1980's, over six million Afghans sought refuge in neighboring countries, and at least one million Afghans were killed.^[3] In response to this mass exodus, refugee camps were set up along the border of Pakistan and Afghanistan in an area known as the Northwest Frontier Province, and by December of 1990 about 3.3 million Afghans were living in these camps located in over 300 refugee villages.^[3]

In 1994 the Taliban, a violent Islamic fundamentalist movement that most likely originated from religious institutions in Pakistan, spread throughout southern Afghanistan, further spurring Afghans to flee to less hostile environments.^[1] Following the spread of Taliban forces throughout Afghanistan, in September of 1997 Afghanistan's Ministry of Public Health ordered all but one of Kabul's hospitals to halt its services for the city's half-million women.^[1] Although this decision was subsequently reversed following discussions with the International Red Cross, women still suffered from severely diminished access to most hospitals for many years.^[1] As of May 1998, women were only able to access 20% of hospital beds, while 70% of hospital beds were allocated for men.^[1] A study conducted by Zohra Rasekh et al among 80 Afghan women living in Kabul and 80 Afghan women who had recently migrated to Pakistan showed that the effects of Taliban abuses and war traumas had a deep impact on women's' physical and mental health,^[1] a troubling statistic considering that women and children made up three fourths of the Afghan refugee population.^[1] Because of traumatic experiences during escape from countries of origin, living in refugee camps, cultural conflicts

and problems adjusting to new settings, loss of family, community members, livelihood and security, refugees run a high probability of developing mental health complications. [4]

Although it has been well documented that war and armed conflict are extremely destructive to public mental health and social infrastructure, the impact of family dynamics and the home environment in the context of conflict upon child mental health must be explored further. [5] Kenneth Rasco and Lisa Miller have compiled social science research indicating significant impacts of family wellbeing and distress on child refugees. [6] Other researchers have also highlighted the importance of a supportive family unit for refugee mental health. [7] [8] They point out that for refugees whose entire sense of community and social infrastructure has nearly collapsed, the family may provide the only social group to which family members feel they belong. Therefore it is necessary to understand how the functioning of refugee families impacts the mental health of children who have grown up in protracted stressful environments. For example, the parent-child relationship has been studied as a critically important dynamic that can profoundly positively or negatively impact a child's ability to remain resilient in the context of ongoing violent trauma. [9] Extended family networks also play a role in child mental health during and after displacement events. [6] Such networks have been conceptualized in several ways through both observation and self-report of family members. [6]

In 2011, the UN Human Development Report estimated that 50% of Pakistan's population was living in poverty, and that stable employment is an exceedingly rare commodity. [2] Pakistan has only been able to "cope" with the influx of Afghan refugees, rather than provide them with a strong state health system, which comes as no surprise as it has also dealt with its own ongoing conflict with neighboring countries, violence and terrorism for several decades. [4] In 1998, there was one psychiatrist per one million persons in Pakistan, [10] but in 2005 this ratio increased to one psychiatrist per every half-million Pakistani individuals according to the 2011 population estimate. [2], [11]

A study conducted in four secondary schools in Rawalpindi, Pakistan indicated that the vast majority of 100 schoolchildren believed that “the mentally ill are dangerous, immoral, and a bad omen for the family”, reflecting deeply rooted traditional beliefs.^[10] Again, approximately 80% of these schoolchildren responded that the “mentally ill are themselves responsible for their illness”, and that “mental illness is contagious.”^[10] Those individuals who do seek help for mental health concerns usually go to religious healers first, who heal with the Koran; patients will then seek help from traditional and alternative healers.^[11] Considering that many Afghan refugees had children while living in northwest Pakistan, it is likely that Afghan children were exposed to these views on mental illness. This is a concern because of the many traumatic and stressful experiences these children and their families have endured.

A 2004 cross-sectional study of Afghan refugees visiting a psychiatric clinic in Peshawar, Pakistan indicates that 80% of 1,000 patients had a PTSD diagnosis, and that nearly half (47.9%) reported a family history of mental health morbidity based on data collected using the Mini International Neuropsychiatry Interview Schedule (MINI).^[4] In this sample, there were no gender differences, most patients were uneducated and unemployed, spoke Pashtu, and most were married and had three or more children. ^[4] Men reported torture and assault and women were emotionally impacted by bombings during war. ^[4]

This document is intended to examine two hypotheses: the first hypothesis is that caregiver mental health was associated with the mental health of children in Peshawar. The second hypothesis is that refugee status, as determined by living in either Peshawar or Kabul, significantly impacted the association between caregiver and child mental health.

Methods:

This document provides a primary analysis of mental health data collected among 11- to 16-year old children and their caregivers in Peshawar, and a secondary analysis of the same mental health data collected among children and their caregivers living in Kabul, by Catherine Panter-Brick and Mark Eggerman and their local partner from Pakistan's University of Peshawar, Sarah Safdar. In 2005, Catherine Panter-Brick and Mark Eggerman conducted a survey containing five mental health indicators among 319 11- to 16-year old schoolchildren (n = 161 boys, 158 girls) and their caregivers (n = 319) who were living in seven refugee camps located in Peshawar, Pakistan in the Northwest Frontier Province. The purpose of conducting these surveys was to gather data on childhood exposure to traumatic events, and mental health indicators including self- and caregiver-reported daily functioning, depression, and PTSD of the children, as well as exposure to trauma, daily functioning from caregivers.

In Kabul in 2006, the same mental health data of 364 11- to 16-year old schoolchildren (n = 180 boys, 184 girls) and their caregivers (n= 364) were collected using the same layers of stratification and interview techniques, as described in the next section of this document. We are analyzing data from both Peshawar and Kabul in order to find significant similarities and differences in child mental health by refugee status and gender.

Interviews:

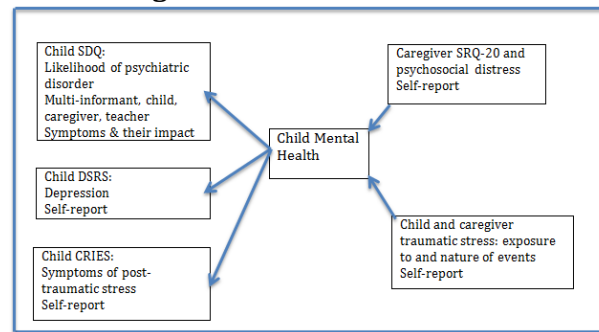
In both Kabul and Peshawar, a professional translation service translated the questionnaires into Pashtu and Dari, and then a team from Peshawar back-translated the questionnaires into English to ensure linguistic validity and true translation. Team meetings were also held in order to verify the content and face validity of the questionnaires in compliance with the procedure recommended by Mark Van Ommeren.^[12] The point of using the chosen screening tools outlined below, was to ensure cross-cultural sensitivity and reliability.^[12] Local teams in Peshawar and Kabul carried out the interviews in their respective cities. These teams consisted of three women and three men and one local project manager.

The informants within the local teams of both Kabul and Peshawar interviewed the children and caregivers separately and in the same order; the same informant would interview each of these individuals. None of the information shared by the child or parent was shared with any of the study participants. One girl was excluded from the Peshawar dataset due to a substantial amount of incomplete data.

Children were interviewed individually by one trained team member matched on gender, separately from their caregivers, and without the knowledge of responses given from any other individuals. The same conditions applied for caregiver interviews, which were conducted individually and without knowledge of the child's answers to survey questions.

- The youth questionnaires consisted of the Strength & Difficulties Questionnaire, Birleson Depression Self-Rating Scale for Children, Traumatic Events Checklist and Child Revised Impact of Events Scale (CRIES).
- The caregiver questionnaires consisted of the Youth & Family Questionnaire, Strength & Difficulties Questionnaire (to be answered based on the perceived characteristics of their child participants), Caregiver Self-Report Questionnaire, and Caregiver Traumatic Events Checklist.

Figure 1: Assessments



Adapted from Panter-Brick et al. 2009

Survey Questionnaire:

The Strength & Difficulties Questionnaire (SDQ) contains twenty-five questions about psychological characteristics appropriate for 3- to 16-year olds, and it is intended to be answered by those children, their caregivers and teachers. The twenty-five items are divided into five scales addressing emotional symptoms, conduct issues, hyperactivity/inattention, peer relationship issues, and prosocial behaviors. Wording varies slightly for questionnaires based on the intended participant (student, parent, teacher).^[13] Components one through four (emotional through peer relationship) are summed to generate a “total difficulties” score.^[13] The version administered to 11-to 16-year old children is designed to be self-completed, although this hinges upon their literacy and understanding of the questions.^[13]

The Birleson Depression Self-Rating Scale for Children (DSRS) contains 18 questions that assess childhood symptoms of depression experienced within the past week, appropriate for students’ ages 11-15.^[14] Most children score above 11, and a score above 18 indicates a high probability of clinical depression.^[14]

The CRIES questionnaire contains thirteen questions designed to determine if and how frequently children at least eight years of age have experienced post-traumatic stress symptoms within the past week. This questionnaire also contains three subscales that measure symptoms of intrusion, avoidance, and hyperarousal.

The Self-report questionnaire (SRQ-20) consists of 20 questions that focus on emotions and mental health from the past thirty days, and this was administered to all caregivers

participating in the study. Several of these questions target the caregiver's feelings of self-worth and thoughts, but most of them are phrased to ask about somatic symptoms. It is much better to ask questions about specific somatic symptoms, as these are more easily interpreted and accepted by populations with low literacy rates, such as this population.^[15]

The Traumatic Events Checklist consists of 24 questions regarding violent and/or traumatic experiences and simply asks the participant if he or she has experienced those events. The checklist also asks for the traumatic event that was most distressing to the participant at that time. Additional collected information included height, weight, heart rate and blood pressure. This was done in order to communicate the legitimacy of the questionnaires as a true *health* survey, as well as to offer free health information to the community. *In all of the aforementioned mental health and trauma surveys, increasing scores indicate poorer mental health symptomology or more exposure to traumatic events.*

These same questionnaires were used to collect mental health data from schoolchildren ages 11-16 and their caregivers in Kabul, Afghanistan in 2006. Because this population sample has experienced vastly different events due to either staying or repatriating back to Kabul, Afghanistan during conflict, we have compared their mental health data, traumatic events and basic socioeconomic data with the same data collected in Peshawar, Pakistan in 2005.

Subject Selection:

Peshawar, Pakistan was chosen as the interview site because of its large Afghan refugee population. Its location in the middle of the Northwest Frontier Province and large metropolitan area were two factors drawing refugees – the large number of refugee camps in the area and the perception among Afghans of finding more employment opportunities than in Afghanistan.^[3] In both Kabul and Peshawar, investigators were supplied with a list of schools from which child participants were chosen. Investigators in Peshawar, however, were first supplied with a list of all refugee camps, as well as the schools that were located in each of

these camps. In both Kabul and Peshawar, schools were then randomly chosen from these lists. For one week prior to survey administration, local teams of three women, three men, and one manager began with rapport-building drawing activities in each school. It was determined that forty children aged 11-16 (n = 20 boys; n = 20 girls) would be selected from the roster lists provided by the schools.

The team members, after having obtained the school enrollment lists, would ask any student to call out any number between one and the total number of students on the school list, and this number would serve as the starting point for the survey sample. After determining the sample interval by dividing the total number of students on the school list by the total sample size, the interviewer would use that interval to determine the rest of the student sample. The only criteria for participating in the survey was being between 11-16 years of age, so if a selected student did not meet that criteria, he or she would be skipped and the interviewer would continue down the list using the appropriate sampling interval.

Figure 2: Sample Selection

Sample Selection in Peshawar:

Sampling universe: Peshawar, Pakistan
13 camps

Total number of schools: 50 schools identified

All-age total student population: 15,482

Official data obtained in 2005 from district & municipal-level Departments of Education and local administrative offices



Sampling stage 1: random sample of schools

Number of selected schools:
7 schools ~14% of all listed schools

All-age student population: 9052

Target-age student population (grades 5-10): 3205

Data obtained at schools from class-specific lists (grades 5-10 apply to 11-16 year-old students)



Sampling stage 2: random sample of students

Age 11-16 years ~10% of target-age population

Male	Female	Total
160	160	320

Full data for 319 multi-informant interviews with students, caregivers, and teachers

Sample Selection in Kabul:

Sampling universe: Kabul, Afghanistan
Total number of state-operated schools: 165 schools identified

All-age total student population: 723,435

Official data obtained in 2006 from district and municipal-level Departments of Education and local administrative offices



Sampling Stage 1: random sample of schools
Number of selected schools:
9 schools ~6% of all listed schools

All-age student population:

Male	Female	Total
33,779	27,615	61,394

Target-age student population (grades 5-10):

Male	Female	Total
5,077	4,422	9,499

Data obtained at schools from class-specific lists (grades 5-10 apply to 11-16 year-old students)



Sampling stage 2: random sample of students

Age 11-16 years ~4% of target-age population

Male	Female	Total
180	184	364

Full data for 364 multi-informant interviews with students, caregivers, and teachers

Statistical Analyses:

Self-rated SDQ (both continuous and binary), caregiver-rated child SDQ (continuous), self-rated DSRS (continuous), and self-rated CRIES scores (continuous) are presented as child mental health outcomes, and caregiver-rated SRQ-20 scores (continuous) are presented as the caregiver mental health score. The caregiver-reported SRQ-20 score, gender and age of the child, and exposure to traumatic events were used as predictors for child mental health outcomes. Binary outcomes for SDQ scores were based on multi-informant interviews of child, parent and teacher to produce probable vs. possible/unlikely psychiatric disorder. Binary outcomes were also used for CRIES scores to represent the current psychological effect of reported traumatic exposures, and this outcome is referred to as PTSD in subsequent multivariate regressions. CRIES scores greater than or equal to 17 on the intrusion or avoidance items were categorized as being in the high range and were therefore indicative of PTSD.^[16] All binary outcomes were analyzed in logit multivariate regressions, in which the resulting beta-coefficients can be interpreted in the same manner that continuous regressions are interpreted. For child- and caregiver-reported child difficulties questionnaires, DSRS, total CRIES and SRQ-20 scores, the continuous range of the scale was used in continuous multivariate regressions. Stata/IC 12.1 was used for all regressions, survey data estimations, and to adjust for within-school sex distribution and clustering by school for both Peshawar and Kabul. This accounts for the probability of selecting boys and girls within schools, as well as variance found within clusters, in order to produce robust standard errors. SPSS and Microsoft Excel were used for data verification purposes. For all statistical determinations, significance levels were established at $P < 0.05$.

Traumatic events exposures were analyzed in terms of total number and event characteristics. In the multivariate analyses, we used the continuous range of traumatic exposures as one predictor variable. We grouped the child's most distressing event into the following categories for pie graphs and bar graphs: physical trauma to self, witnessing

physical trauma to another person, reported death or injury of a relative, witnessing police searches (Peshawar) or military action (Kabul), forced displacement to a camp (Peshawar & Kabul), or separation from family (Kabul), or other.

Results:

Basic Demographics for Peshawar

The Peshawar sample contained an almost equal number of male and female 11-to 16-

Table 1: Peshawar Caregivers by Sex

Peshawar Caregivers	N	Percentage
Mother	102	31.9%
Father	81	25.4%
Other Caregiver	136	42.6%
Male	78	24.5%
Female	58	18.2%

year old participants, including 161 boys, 158 girls and 319 caregivers. Caregivers included 102 mothers (31.9%), 81 fathers (25.4%), 78 close female relatives (24.5%), and 58 close male relatives (18.2%) such as aunts, uncles,

grandparents or older siblings (Table 1). The dataset of $n = 319$ excludes one female child case with missing variables of interest, as her caregiver did not participate in the study.

The mean age of students was 12.7 ± 1.5 years for boys and 12.5 ± 1.4 years for girls with an average of 4.36 and 3.86 years of formal education, respectively. 205 of 319 (64.2%) had been displaced due to conflict, economic reasons, or both, and of those who had ever been forced to move, 106 (33.2%) moved only once, 53 (16.6%) moved twice, and 159 (49.8%) moved three times or more. 21 (6.6%) children had lost a parent, and 31 (9.7%) children worked outside of school hours. The mean length of time children had been living in their home was 9.34 years (2 months to 16 years, 1 month); however, these data were not normally distributed as 61.4% of children lived in their homes for at least 10 years. 88 (27.7%) of caregivers reported believing that their family would move home within the next year, while 168 (52.8%) believed they would not return home, and 62 (19.5%) reported not knowing.

Data collected on socioeconomic status variables included children's family's ability to afford certain household items, and the caregiver's perceptions of the family's overall financial status. These socioeconomic variables were analyzed for correlation with mental health variables of interest in both Kabul and Peshawar, and while some were marginally significant in independent associations, none of them remained influential and significant in any of the

multivariate regressions predicting child mental health. For these reasons, socioeconomic variables were excluded from the remainder of the results.

Basic Demographics for Kabul

The Kabul sample included 364 child participants (n=180 boys and n=184 girls) and 364 caregivers. Caregivers included 161 mothers (44.2%), 85 fathers (23.4%), 37 close female relatives (10.2%), and 81 close male relatives (22.3%) including aunts, uncles, siblings, grandparents and cousins (Table 2).

The mean age of students was 13.5 ± 1.6 years for boys and 13.7 ± 1.5 years for girls, with an average of 5.75 and 5.71 years of formal education, respectively. 298 of 364 (82.1%) had been displaced due to conflict, economic reasons, or both, and 54.67% had been displaced at least three times. 36 (9.9%) children had lost a parent, and 96 (26.4%) children worked outside of school hours. Tables 3 and 4 show that boys work significantly more than girls in both Kabul (p-value < 0.001) and Peshawar (p-value 0.09). Children in Kabul are both older and have more years of formal education than children in Peshawar. Nearly all children had mothers who were alive, but in both areas, more children were missing fathers.

Table 2: Kabul Caregivers by Sex

Kabul Caregivers	N	Percentage
Mother	161	44.2%
Father	85	23.4%
Other Caregiver	118	32.4%
Male	81	22.3%
Female	37	10.2%

Table 3: Peshawar Basic Demographics

	Boys (n = 160)		Girls (n = 158)		P-value
Mean Age (years)	12.7 ± 1.45 (11 to 16)		12.5 ± 1.4 (11 to 16)		0.2121
Mean Years Formal Education	4.36 (1 to 12)		3.86 (1 to 10)		0.1
Birthplace					
Afghanistan	32	20%	32	20.10%	0.9068
Pakistan	129	80%	126	79.70%	
Ethnicity					
Pashtun	120	74.50%	102	64.60%	0.2979
Tajik	39	24.20%	53	33.50%	
Other	2	1.20%	3	1.90%	
Does child perform labor after school?					
Yes	24	15%	7	4.40%	0.09
No	136	85%	151	95.60%	
Father Living	147	91.30%	151	95.57%	0.143
Father Died	14	8.70%	7	4.43%	
Mother Living	157	97.50%	158	100%	0.1952
Mother Died	4	2.50%	0	0.00%	

Table 4: Kabul Basic Demographics

	Boys (n = 180)		Girls (n = 184)		P-value
Mean Age (years)	13.5 ± 1.62 (11 to 16)		13.7 ± 1.53 (11 to 16)		0.2594
Mean Years Formal Education	5.75 (0 to 9)		5.71 (0 to 10)		0.92
Birthplace					
Afghanistan	156	86.67%	167	90.76%	0.2167
Elsewhere	24	13.33%	17	9.24%	
Ethnicity					
Pashtun	30	16.67%	32	17.39%	0.3168
Tajik	103	57.22%	115	62.50%	
Other	46	25.56%	36	19.57%	
Does child perform labor after school?					
Yes	74	41.11%	22	11.96%	< 0.001
No	106	58.89%	162	88.04%	
Father Living	162	90.00%	170	92.39%	0.4219
Father Died	18	10.00%	14	7.61%	
Mother Living	176	97.78%	182	98.91%	0.3964
Mother Died	4	2.22%	2	1.09%	

Table 5: Caregiver SRQ-20 Scores by Area of Residence

Caregiver SRQ-20 Scores by Area of Residence					
Peshawar (n = 319)			Kabul (n = 364)		
Mother	Father	P-value	Mother	Father	P-value
10.80 ± 4.59	5.78 ± 4.88	0.0044	10.65 ± 4.23	5.89 ± 3.82	0.0001
Other Female Caregiver	Other Male Caregiver	P-value	Other Female Caregiver	Other Male Caregiver	P-value
9.50 ± 4.58	5.19 ± 4.20	0.0203	9.77 ± 3.68	6.18 ± 3.88	0.0005

Data presented are mean ± standard deviation.

Caregiver Mental Health

Mental health of caregivers (Table 5) differed significantly by sex in both Kabul and Peshawar. Mothers had significantly greater mental health burdens (as measured by higher SRQ-20 scores) than fathers had in both Peshawar (p-value 0.0044) and Kabul (p-value 0.0001). Female caregivers also had significantly greater mental health burdens than other male caregivers had in both Peshawar (p-value 0.0203) and Kabul (p-value 0.0005). Therefore in both Peshawar and Kabul, female caregivers had higher mental health burdens than men, meaning that female caregivers had significantly higher SRQ-20 scores than male caregivers in both Kabul and Peshawar. When mother, father, other female caregiver and other male caregiver means were compared between Kabul and Peshawar, however, no significant differences were found.

Childhood Traumatic Exposures

Children from Peshawar reported significantly more traumatic events than children from Kabul reported (p-value 0.0003). 145 (90.0%) of boys and 153 (96.8%) of girls in Peshawar reported some exposure to traumatic events. Among these children, 83 (30.5%) reported that physical trauma to self was their most traumatic event. 109 (60.6%) boys and 119 (64.7%) girls from Kabul reported having experienced some trauma. Among these children 72 (31.9%) reported that the most distressing event was the death or disappearance of a relative or friend.

Figure 3a: Peshawar Children’s Traumatic Events

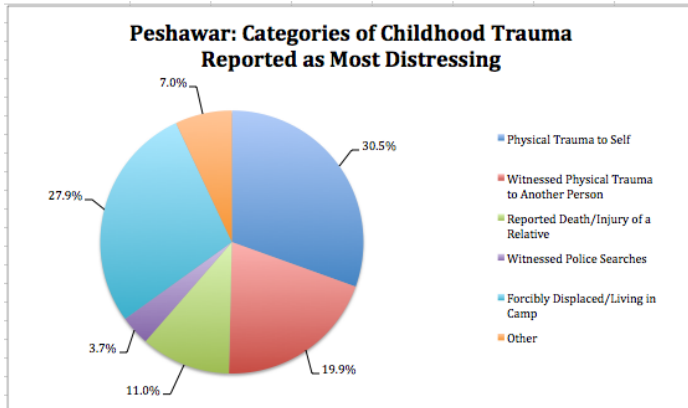
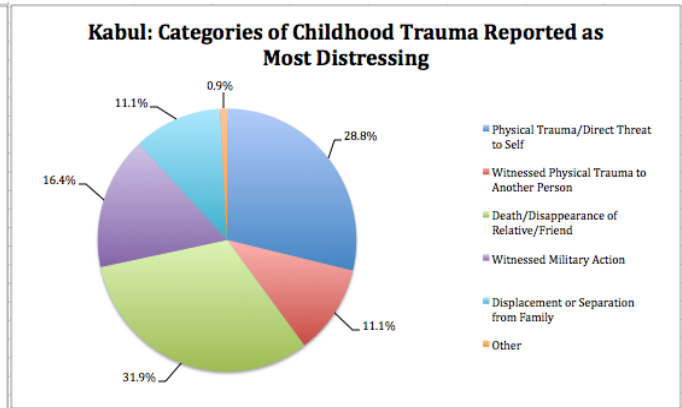


Figure 3b: Kabul Children’s Traumatic Events



As indicated in Figure 3a above, the top three most distressing events reported by the Peshawar cohort revolved around physical trauma to self or others and forced displacement/living in camp. In Kabul (Figure 3b), the top three most distressing events reported by children were death/disappearance of a relative/friend, physical and military violence. Therefore it appears that physical trauma done to self and others contributed greatly to the distress reported by children in both areas. Importantly, displacement and camp conditions were reported nearly as frequently as physical harm for children in Peshawar.

Figure 4a: Total Traumatic Events by Area

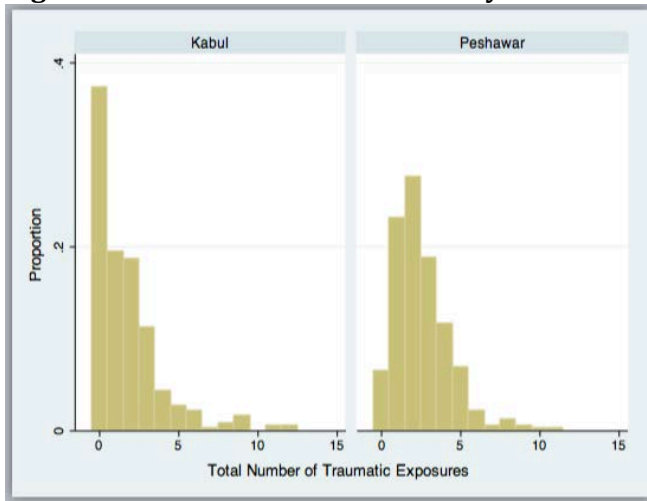
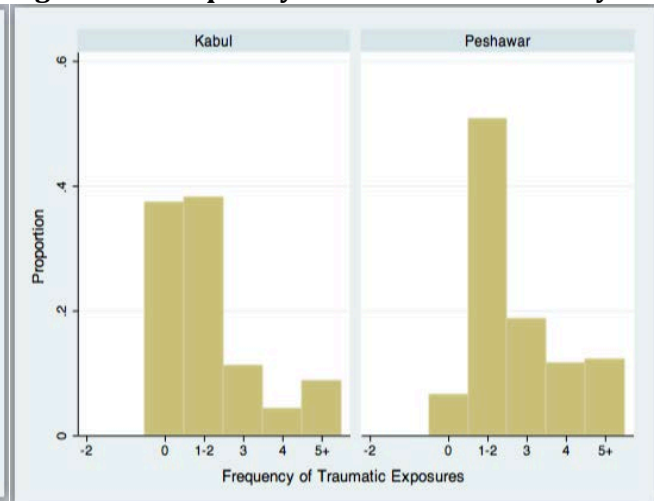


Figure 4b: Frequency of Traumatic Events by Area



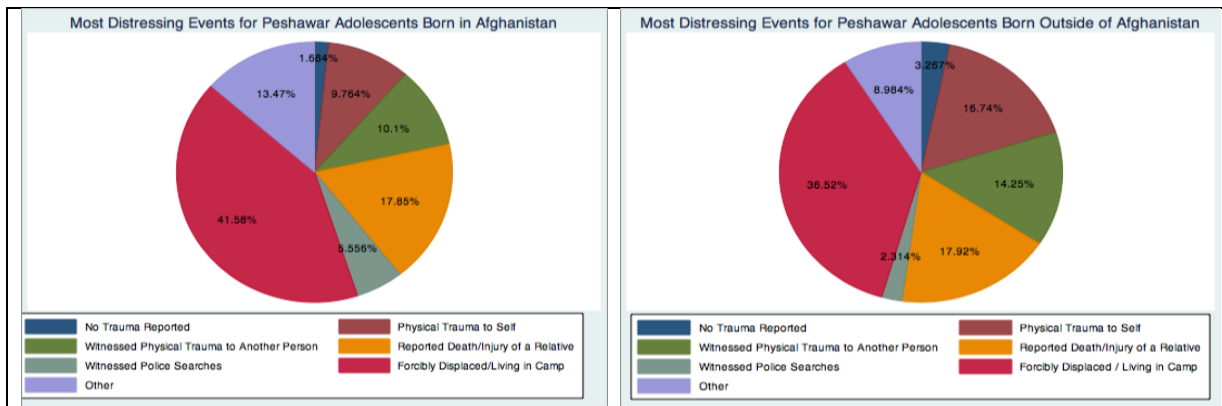
As depicted in Figures 4a and 4b above, children in Peshawar reported more traumatic exposures than children from Kabul. More children from Kabul reported having experienced no traumatic events (p -value 0.000), and more children from Peshawar reported either 1-2

traumatic events (p-value 0.001) or 3-4 traumatic events (p-value 0.0405). No statistical difference could be found for children reporting five or more traumatic events between Peshawar and Kabul because of the small sample size from each area.

Among the Peshawar cohort, the children who were born in Afghanistan and moved to Peshawar, Pakistan averaged a total CRIES score of 14.3 ± 12.6 , while those who were born in Pakistan averaged a total CRIES score of 8.5 ± 10.8 , (p-value 0.0044). The mean approximate age of boys and girls born in Afghanistan *during* the time of their travel to Peshawar from Afghanistan was 6.6 years, while those who traveled to Peshawar from other areas arrived in Peshawar at an approximate age of 2.5 years (p-value 0.000), a point which may help to address the significant difference in both groups' aforementioned CRIES scores.

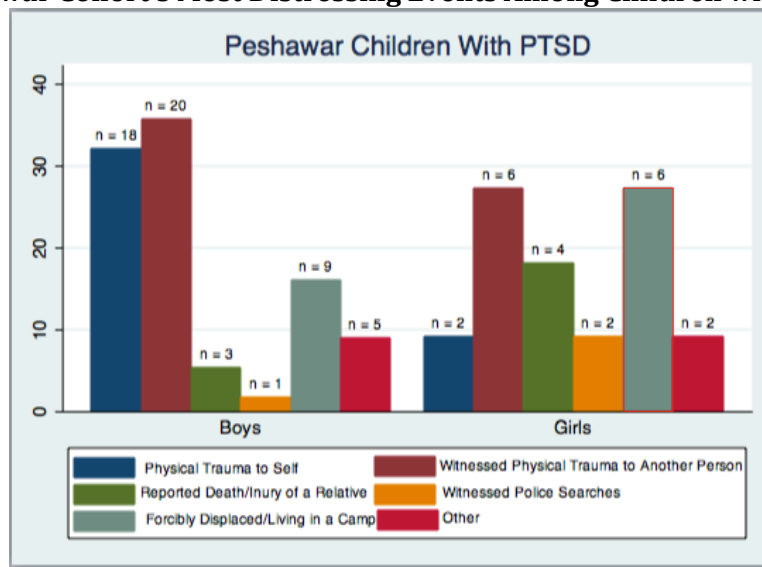
Figure 5a: Peshawar Cohort's Most Distressing Events for Children Born in Afghanistan (n = 53)

Figure 5b: Peshawar Cohort's Most Distressing Events for Children Born in Pakistan (n = 220)



Although statistically insignificant, among the Peshawar cohort, more children who moved from Afghanistan to Pakistan reported their most distressing event to be forcible displacement compared to children born in Pakistan (41.6% versus 36.5%). Overall, however, the proportions of most distressing events are very similar for those children born in Afghanistan and children born in Pakistan.

Figure 6: Peshawar Cohort's Most Distressing Events Among Children with PTSD (n = 78)



Many of the categories for the most distressing traumatic exposure occur in similar frequencies by gender. However, Peshawar boys with PTSD reported much more physical trauma to self (n = 18) and witnessing physical trauma (n = 20) than Peshawar girls reported physical trauma to self (n = 2) and witnessing physical trauma (n = 6). After combining physical trauma to self with witnessing physical trauma for boys (n = 38) and girls (n = 8), frequency of reporting these physical trauma events was not statistically significant across gender (p-value 0.0627).

Table 6: Mean Mental Health Outcomes by Area of Residence

Mental Health Mean Outcomes by Area of Residence	Peshawar (n = 319)			Kabul (n = 364)		
	Girls	Boys	P-value	Girls	Boys	P-value
<i>Total Difficulties Score</i>						
Self	11.7 ± 5.2	8.1 ± 4.6	0.028	11.6 ± 5.2	10.4 ± 4.9	0.13
Parent	13.7 ± 5.3	8.9 ± 5.9	0.037	12.6 ± 5.8	11.5 ± 5.2	0.24
<i>Symptoms of Depression (Mean DSRS score)</i>	11.9 ± 4.1	7.1 ± 5.1	0.0014	10.5 ± 4.8	9.206 ± 3.9	0.08
<i>Symptoms of Post-traumatic Stress (Mean CRIES score)</i>	5.5 ± 9.1	14.5 ± 12.0	0.0096	14.4 ± 9.1	13.1 ± 8.7	0.318

Childhood Mental Health

In Peshawar, girls scored significantly higher than boys on self-rated (p-value 0.028) and parent-rated (p-value 0.037) total difficulties scores, as well as on the Birleson depression

scale (p-value 0.014) (Table 6). Boys in Peshawar, however, had a significantly higher mean CRIES score than Peshawar girls (p-value 0.0096). Girls and boys in Kabul did not show any significant difference in any of these mental health outcomes. We then compared differences in child mental health across refugee status (by area of residence). There were significant differences in two measures – post-traumatic stress and symptoms of depression (Table 7). Post-traumatic stress was significantly higher among girls living in Kabul than girls living in Peshawar (p-value 0.0244). Birlerson depression scores were significantly higher among boys living in Kabul than in Peshawar (p-value 0.0141). Among boys and girls who reported some traumatic exposure in Kabul, there was no significant difference in having PTSD (p-value 0.3590). In Peshawar there was a significant difference in having PTSD between boys and girls (p-value 0.0231), (Table 8 & Figure 7).

Table 7: Mean Mental Health Outcomes by Gender

Data presented are mean (95% confidence interval) or prevalence (% of area n).

Mental Health Outcomes by Gender	Girls (n = 342)			Boys (n = 341)		
	Peshawar (n = 158)	Kabul (n = 184)	P-value	Peshawar (n = 161)	Kabul (n = 180)	P-value
Likelihood of Psychiatric Disorder	44 (13.8%)	84 (23.1%)	0.1073	41 (12.9%)	46 (12.6%)	0.9926
Symptoms of Depression	11.92 (10.92 to 12.91)	10.55 (9.04 to 12.06)	0.121	7.13 (6.05 to 8.20)	9.26 (8.08 to 10.45)	0.0141
Likelihood of PTSD (CRIES > 17)	22 (6.9%)	48 (13.2%)	0.0244	56 (17.6%)	22 (6.9%)	0.2614

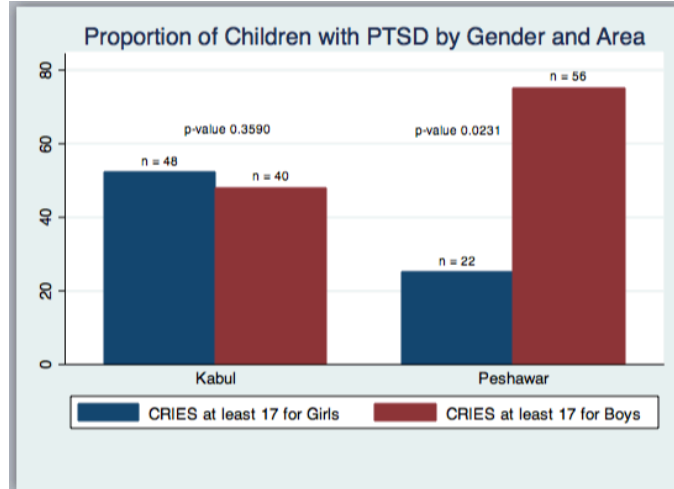
Percentages are given in terms of area's total n (Kabul n = 364; Peshawar n = 319)

Table 8: Children With Traumatic Exposures and PTSD by Gender and Area

Cohort	Kabul (n = 364)			Peshawar (n = 319)		
	Boys n = 180	Girls n = 184	Total n = 364	Boys n = 161	Girls n = 158	Total n = 319
No traumatic exposures	71 (19.5%)	65 (17.9%)	136 (37.4%)	16 (5.0%)	5 (1.6%)	21 (6.6%)
Some traumatic exposures	109 (29.9%)	119 (32.7%)	228 (62.6%)	145 (45.5%)	153 (48.0%)	298 (93.4%)
PTSD (CRIES ≥ 17)	40 (11.0%)	48 (13.2%)	88 (24.2%)	56 (17.6%)	22 (6.9%)	78 (24.5%)
	<i>p-value = 0.3590</i>			<i>p-value = 0.0231</i>		

Percentages are given in terms of area's total n. (Kabul n = 364; Peshawar n = 319)

Figure 7: Children with PTSD by Gender and Area



We then ran multivariate regressions for Kabul and Peshawar individually. In Peshawar, increasing caregiver SRQ-20 scores were significantly associated with increasing child-reported total difficulties, increasing likelihood of having psychiatric disorders, and increasing depression symptoms in Peshawar (Table 9). In Kabul, increasing caregiver SRQ-20 scores were associated with increased scores for all child mental health outcomes except for depression. Gender and total exposure to traumatic events were also significant risk factors for several childhood mental health outcomes.

Table 9: Variables Associated With Child Mental Health Outcomes By Refugee Status

Peshawar	Caregiver-Reported Child SDQ		Child-Reported SDQ		Symptoms of depression		Symptoms of post-traumatic stress (Total CRIES)		Likelihood of Psychiatric Disorder		PTSD Symptoms (CRIES scores in high range [> 17])	
	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value
Sex of child												
Male	***	***	***	***	***	***	***	***	***	***	***	***
Female	-1.06 (-5.94 to 3.81)	0.577	1.15 (-0.96 to 3.26)	0.204	3.33 (1.71 to 4.96)	0.005	-9.87 (-15.2 to -4.54)	0.007	-0.38 (-2.14 to 1.38)	0.581	-1.85 (-3.30 to -0.40)	0.024
Child exposure to traumatic events (all exposures)	-0.38 (-1.00 to 0.24)	0.165	0.83 (0.63 to 1.02)	< 0.001	0.75 (0.49 to 1.02)	0.001	0.69 (-0.61 to 1.98)	0.215	0.10 (-0.12 to 0.33)	0.27	0.13 (-0.11 to 0.37)	0.205
Caregiver's mental health symptoms SRQ-20	-0.34 (-0.74 to 0.07)	0.082	0.36 (0.19 to 0.52)	0.004	0.17 (0.09 to 0.26)	0.004	0.13 (-0.61 to 0.87)	0.653	0.09 (0.04 to 0.14)	0.008	0.03 (-0.14 to 0.19)	0.691
Child age (per year increase)	-0.06 to 0.33)	0.86	0.18 (-0.25 to 0.21)	0.31	-0.01 (-0.25 to 0.23)	0.915	0.996 (-0.29 to 2.29)	0.098	0.15 (-0.07 to 0.38)	0.129	0.16 (-0.14 to 0.46)	0.207
	F-value = 0.2119		F-value = 0.1369		F-value = 0.1926		F-value = 0.2563		F-value = 0.4974		F-value = 0.6490	
Kabul	Caregiver-Reported Child SDQ		Child-Reported SDQ		Symptoms of depression		Symptoms of post-traumatic stress (Total CRIES)		Likelihood of Psychiatric Disorder		PTSD Symptoms (CRIES scores in high range [> 17])	
	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value
Sex of child												
Male	***	***	***	***	***	***	***	***	***	***	***	***
Female	0.27 (-0.87 to 1.41)	0.595	0.73 (-0.34 to 1.80)	0.155	1.22 (-0.20 to 2.64)	0.083	0.93 (-2.06 to 3.93)	0.493	0.78 (0.13 to 1.42)	0.024	0.07 (-0.32 to 0.46)	0.679
Child exposure to traumatic events (all exposures)	0.25 (0.01 to 0.49)	0.043	0.62 (0.32 to 0.93)	0.001	0.69 (0.46 to 0.91)	< 0.001	0.94 (-0.05 to 1.94)	0.061	0.16 (0.03 to 0.28)	0.019	0.22 (0.00 to 0.44)	0.048
Caregiver's mental health symptoms SRQ-20	0.56 (0.42 to 0.69)	< 0.001	0.25 (0.11 to 0.39)	0.003	0.01 (-0.15 to 0.16)	0.935	0.29 (0.04 to 0.53)	0.026	0.11 (0.07 to 0.15)	< 0.001	0.06 (0.00 to 0.12)	0.038
Child age (per year increase)	-0.75 (-1.23 to -0.28)	0.006	0.05 (-0.20 to 0.30)	0.644	-0.09 (-0.39 to 0.21)	0.5	0.77 (-0.32 to 1.85)	0.141	0.01 (-0.16 to 0.18)	0.916	0.23 (-0.06 to 0.51)	0.104
	F-value = 0.0002		F-value = 0.0069		F-value = 0.0126		F-value = 0.0244		F-value = 0.0244		F-value = 0.0393	

Table 10: Variables Associated With Parent and Child-Reported Child Difficulties, Depression and Total CRIES Scores for Kabul and Peshawar Combined

	Caregiver-Reported Child SDQ		Child-Reported SDQ		Birlerson Depression Score		Total CRIES Score	
	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value	Beta-coefficient	p-value
Sex of the child								
Male	...	...	...		...	...	...	...
Female	-1.75 (-2.99 to -0.52)	0.009	2.08 (0.98 to 3.18)	0.001	2.93 (2.00 to 3.86)	< 0.001	-0.80 (-4.73 to 3.13)	0.667
Age of child								
Per year increase	0.32 (-0.08 to 0.72)	0.102	0.19 (-0.01 to 0.39)	0.058	0.01 (-0.17 to 0.20)	0.886	0.16 (-0.51 to 0.84)	0.607
Child Exposure to Traumatic Events								
Total Traumatic Events	-0.13 (-0.43 to 0.17)	0.365	0.42 (0.20 to 0.64)	0.001	0.48 (0.31 to 0.65)	< 0.001	0.91 (0.26 to 1.56)	0.01
Caregiver's Mental Health Symptoms								
SRQ-20	-0.37 (-0.63 to -0.11)	0.009	0.24 (0.11 to 0.38)	0.002	-0.01 (-0.17 to 0.14)	0.868	0.30 (0.10 to 0.51)	0.008
Area of Residence (Kabul = 0; Pesh = 1)								
	-3.30 (-7.10 to 0.50)	0.083	1.31 (-1.11 to 3.73)	0.26	-0.33 (-2.64 to 1.99)	0.764	1.06 (-3.27 to 5.39)	0.604
Caregiver's Mental Health Symptoms * Area of Residence (SRQ-20 * Area)								
	0.51 (0.08 to 0.93)	0.024	-0.31 (-0.51 to -0.10)	0.006	-0.06 (-0.23 to 0.11)	0.468	-0.62 (-0.83 to -0.42)	< 0.001
	<i>F-value 0.1321</i>		<i>F-value 0.0067</i>		<i>F-value 0.0011</i>		<i>F-value 0.0044</i>	

Table 11: Variables Including Gender-Area Interaction Associated With Caregiver-Reported Child Difficulties Score

	Caregiver-Reported Child SDQ	
	Beta-coefficient	p-value
Sex of the child		
Male	...	...
Female	0.26 (-0.97 to 1.48)	0.654
Age of child		
Per year increase	0.27 (-0.15 to 0.69)	0.185
Child Exposure to Traumatic Events		
Total Traumatic Events	-0.11 (-0.43 to 0.20)	0.449
Caregiver's Mental Health Symptoms		
SRQ-20	-0.41 (-0.68 to -0.15)	0.005
Area of Residence (Kabul = 0; Pesh = 1)		
	-2.10 (-6.01 to 1.82)	0.266
Caregiver's Mental Health Symptoms * Area of Residence (SRQ-20 * Area)		
	0.62 (0.20 to 1.05)	0.007
Gender * Area of Residence (Gender*Area)		
	-4.44 (-6.77 to -2.12)	0.001
	<i>F-value = 0.0247</i>	

Table 12: Variables Associated With PTSD and Psychiatric Disorders for Kabul and Peshawar Combined

	PTSD (CRIES ≥ 17)		Likelihood of Psychiatric Disorder	
	Beta-coefficient	p-value	Beta-coefficient	p-value
Sex of the child				
Male	...	...	...	...
Female	-0.76 (-1.36 to -0.17)	0.016	0.61 (-0.05 to 1.28)	0.067
Age of child (per year increase)				
	0.23 (0.04 to 0.42)	0.024	0.10 (-0.04 to 0.23)	0.141
Child Exposure to Traumatic Events				
None reported	0.13 (0.04 to 0.23)	0.011	0.14 (0.04 to 0.24)	0.01
Caregiver's Mental Health Problems				
Srq-20	0.09 (0.03 to 0.15)	0.008	0.12 (0.08 to 0.16)	< 0.001
Area of Residence (Kabul = 0; Pesh = 1)				
	1.00 (-0.26 to 2.27)	0.11	1.46 (0.39 to 2.52)	0.012
Caregiver's Mental Health Problems * Area of Residence (SRQ-20 * Area)				
	-0.14 (-0.26 to -0.29)	0.018	-0.23 (-0.32 to -0.14)	< 0.001
	<i>F-value 0.0541</i>		<i>F-value 0.0213</i>	

Differences in Impact of Caregiver SRQ-20 on Childhood Mental Health by Area

In the combined Peshawar and Kabul dataset, increasing caregiver mental health burden was significantly associated with increased child mental health burdens except for depression, the impacts of which all also differed significantly by refugee status except for depression (Tables 10 - 12). Girls had a significant risk over boys for having increased child-reported difficulty (SDQ) and depression scores. Boys had a significantly larger risk than girls for having increased caregiver-reported difficulty (SDQ) scores and for the likelihood of having PTSD.

Exposure to traumatic events was a risk factor for all mental health outcomes with the exception of the parent-reported child difficulties (SDQ) scores (Tables 10 - 12). In order to examine the impact of gender on parent-reported child difficulties (SDQ) scores by area, we added the gender*area interaction variable to the combined-area parent-reported SDQ regression. This reduced the regression's F-value from 0.1321 to 0.0247. The gender*area interaction variable was also highly significant (p-value 0.007) when it was included in the parent-reported child difficulties regression, indicating an important interaction between gender and area for this regression.

The SRQ-20*area interaction variable in the combined-area multivariate regressions (Tables 10 - 12) also shows that caregiver mental health impacted child mental health significantly differently by refugee status (Kabul versus Peshawar). Tables 10 through 12 indicate that increases in caregiver SRQ-20 were associated with significantly higher scores in child difficulties, total CRIES scores, PTSD and the likelihood of having psychiatric disorders in Kabul than in Peshawar. Upon further analysis of the impact of caregiver SRQ-20 on child mental health, several significant gender differences emerged. Increases in caregiver SRQ-20 were associated with significantly worse child-reported total difficulties in girls (p-value 0.002) and boys (p-value 0.033) in Kabul than in Peshawar. Increases in caregiver SRQ-20 also were associated with a significantly higher likelihood for girls (p-value 0.001) and boys (p-value 0.001) to have a psychiatric disorder in Kabul than in Peshawar. Increases in caregiver SRQ-20 also were associated with a significantly higher

likelihood for boys to have PTSD in Kabul than in Peshawar (p-value 0.038). Appendix B contains the combined multivariate regressions *omitting* the SRQ-20*area interaction variable, and can be used as a point of reference to demonstrate the significance of the impact of refugee status (represented by area) on the caregiver – child mental health relationship. This impact can be understood by observing the difference between the highly significant p-values for the SRQ-20*area interaction variables (Tables 10 – 12) and the insignificant p-values for SRQ-20 variables in Table 13, found in Appendix B.

Discussion:

In first considering caregiver mental health burden by refugee status, increases in Peshawar caregiver SRQ-20 scores were significantly associated with increased child mental health scores, including child-reported difficulties (SDQ) scores, the likelihood of having any psychiatric disorder, and symptoms of depression. Therefore, for every one-point increase in caregiver SRQ-20 scores, child-reported difficulties increased by 0.36 points. In Kabul, increases in caregiver SRQ-20 scores were significantly associated with increased child-reported difficulties (SDQ) scores, likelihood of having any psychiatric disorder, total CRIES scores, and likelihood of having PTSD. This indicates that for every one-point increase in Kabul caregiver SRQ-20 scores, child-reported total difficulties increased by 0.25 points. Although the significant SRQ-20 scores may appear to have shown only marginal increases in increased likelihood of children having mental health problems, the impact was made on *each* symptom the child reported. Caregiver mental health did significantly impact child mental health in both Peshawar and Kabul.

Impact of caregiver SRQ-20 on child mental health symptoms varied significantly between Kabul and Peshawar, with a more pronounced effect on child mental health symptoms in Kabul. This is contrary to the second hypothesis made in the introduction, that poor caregiver SRQ-20 scores more significantly impacted child mental health in Peshawar refugee camps. Because caregiver SRQ-20 scores were not significantly different between Peshawar and Kabul, some factor may have deteriorated the relationship between caregivers and children living in Kabul, such as elevated family tension due to protracted violence and political instability. Our data seem to indicate that the environmental conditions of Kabul negatively modified the impact of caregiver mental health on child mental health. One of the following scenarios might help to explain the observed differences in the impact of caregiver mental health on child mental health between Kabul and Peshawar. Perhaps the mental health status of Peshawar caregivers did not burden their children's mental health as much as in Kabul. Alternatively, Peshawar's selected sample may

not have possessed enough randomness to capture a more profound caregiver-child mental health relationship. This latter option may have been the case, considering that the F-values for the mental health regressions for Peshawar were not as significant as in the mental health regressions specific for Kabul.

Socioeconomic variables remained insignificant in multivariate regressions by area, and only minimally significant in bivariate regressions, so their influence on mental health was not analyzed. This is not intended to minimize the various and important ways in which such factors influence individual and family mental health.

Within the Peshawar cohort, the high average CRIES scores for children who moved from Afghanistan to Pakistan most likely contributed to the higher Peshawar CRIES averages compared to children living in Kabul. It is interesting that in spite of the significant difference in total CRIES scores between Peshawar cohort children born in Afghanistan and children born in Pakistan, there was no significant difference in PTSD between these groups. Because children who were born in Afghanistan also moved to Peshawar at an older age than children born in Pakistan (6.6 years compared to 2.5 years), it is possible that these older children could have recalled more of the displacement-associated trauma of moving from Afghanistan to Peshawar refugee camps^[17], and for this reason reported higher CRIES scores compared to the rest of the Peshawar cohort. Conversely, DSM-IV studies on PTSD have consistently indicated that the earlier a child is exposed to traumatic events and the longer the duration of these events, the higher a child's probability of having future stress and anxiety.^[18]

In further analysis of what was driving the high mean CRIES score of boys in Peshawar, it was found that boys with PTSD reported much higher rates of physical trauma to self, and witnessing physical trauma to another person compared to Peshawar girls with PTSD. It is likely that boys were experiencing much higher levels of violence outside of their homes in Peshawar, to which girls were not exposed because they likely spent more time inside of their homes than boys. It appears then that a violent environment may have been

the main driver behind higher rates of PTSD in boys in Peshawar (17.6%) compared to boys in Kabul (6.9%). These findings suggest that boys may have been susceptible to post-traumatic stress resulting from violence, which is an important consideration given the amount of emphasis on mental health sequelae suffered by girls growing up in many Muslim communities.^[19] The trauma exposure data also suggest that children in Kabul may have experienced a greater loss of friends and relatives than children from Peshawar. It is also important to point out that being female *was* a risk factor for depression in Peshawar as well as in the combined-area regressions, although the latter point may have been driven by the large and significant risk girls faced for experiencing depression in Peshawar. Unfortunately, the number of girls with PTSD in Peshawar is too small to make any significant implications about the nature of their most distressing events that could have potentially contributed to their symptoms of depression.

Further research might assess the impact of boys' exposure to community violence, as boys in Peshawar who reported some measure of violence as their most distressing event had very high rates of PTSD. Exposure to violence is related to increased rates of domestic violence among those who experienced or even witnessed it, as reported within some refugee communities.^[20] It would therefore be useful to survey the prevalence of domestic violence among Afghans who either stayed in Afghanistan or sought refuge in Iran or Pakistan during the study period.

Caregiver-child relationships in both Kabul and Peshawar were most likely impacted by the trauma of war and violence affecting Afghanistan and Pakistan for decades. This is a psychological process which has been confirmed in studies on mental health of war-affected families.^[9] In the combined regressions, however, increases in caregiver SRQ-20 led to significantly worse mental health outcomes for children in Kabul compared to children in Peshawar. Children are deeply affected by the ability of their caregivers to make meaning of traumatic experiences.^[9] It would be very helpful to understand how caregivers living in Kabul have emotionally processed the violence they have lived with for decades,

and the extent to which they communicated these issues to their children. It has been shown that caregivers and families offering love and social support to war-affected youth help their children to develop far fewer lifelong mental health symptoms.^[21] For this reason, developing social support for caregivers living in conflict zones may translate to healthier home environments and psychological support for their children. In a study of Colombian children whose family members were victims of violence, family support served as a protective mechanism that allowed the children to avoid the internalization of emotional distress.^[22] It might also be useful to interview children from Kabul regarding their perceptions of their parents' reactions to war-related stress, and how this affected them positively or negatively.

The hypothesis that the caregiver-child mental health relationship varied significantly by refugee status was correct, as increases in caregiver SRQ-20 scores from Kabul more significantly aggravated child mental health burden than in Peshawar. It is possible then that Peshawar camp conditions did not negatively impact caregiver-child relationships enough to produce as many mental health symptoms in their children as in Kabul. It may also be possible that Peshawar's camp environment contributed to a greater shared sense of community than in Kabul, due to the physically confined nature of the camps, and parents' greater willingness to allow their children to leave their houses freely because of this fact. In any case, children were more negatively impacted by their parents' poor mental health in Kabul than in Peshawar, suggesting that Kabul's environment may have seriously negatively affected caregiver-child relationships. Exploring which environmental factors may have exacerbated the caregiver-child relationship more so in Kabul than in Peshawar could provide great insight into the potential protective mechanisms of refugee status on mental health of children. More specifically, understanding how Afghan caregivers transmitted stress and fear differently to their children *by refugee status* could offer useful insight on the basis for our observed improvement of caregiver-child mental health impact in Peshawar's refugee camp setting, compared to Kabul. Along

with the guidance of local psychosocial and mental health experts, such information might contribute towards socially supportive services appropriate for both Afghan caregivers and children who continue to live with violence and conflict.

Appendix A: Syntax Files (Files Attached To Electronic Document)

1. Peshawar Dataset
2. Kabul Dataset
3. Combined Peshawar & Kabul Dataset

Appendix B: Table 13: Combined Multivariate Regressions Without SRQ-20*Area Interaction Variable

	Caregiver-Reported Child SDQ Score		Child-Reported SDQ Score		Birleson Depression Score		Total CRIES Score	
	Beta-coefficient	P-value	Beta-coefficient	P-value	Beta-coefficient	P-value	Beta-coefficient	P-value
Sex of the child								
Male	...	...	...		...	...	...	...
Female	-1.65 (-3.32 to 0.19)	0.052	2.02 (0.65 to 3.38)	0.007	2.92 (1.96 to 3.88)	< 0.001	-0.99 (-5.37 to 3.40)	0.632
Age of child (per year increase)	0.36 (-0.05 to 0.7)	0.078	0.17 (-0.04 to 0.38)	0.095	0.01 (-0.18 to 0.20)	0.922	0.10 (-0.58 to 0.79)	0.747
Child Exposure to Traumatic Events								
Total Traumatic Events	-0.14 (-0.49 to 0.22)	0.411	0.43 (0.21 to 0.65)	0.001	0.49 (0.31 to 0.66)	< 0.001	0.93 (0.34 to 1.51)	0.005
Caregiver's Mental Health Problems								
Srq-20	-0.10 (-0.31 to 0.11)	0.324	0.08 (-0.01 to 0.17)	0.064	-0.04 (-0.13 to 0.04)	0.278	-0.06 (-0.23 to 0.10)	0.442
Area of Residence (Kabul = 0; Pesh = 1)	0.91 (-0.18 to 2.00)	0.094	-1.21 (-2.76 to 0.33)	0.113	-0.81 (-2.20 to 0.58)	0.228	-4.26 (-8.40 to -0.13)	0.044
	<i>F-value 0.2817</i>		<i>F-value 0.0072</i>		<i>F-value = 0.0003</i>		<i>F-value = 0.0742</i>	

	PTSD (CRIES \geq 17)		Likelihood of Psychiatric Disorder	
	Beta-coefficient	P-value	Beta-coefficient	P-value
Sex of the child				
Male	...		...
Female	-0.79 (-1.41 to -0.17)	0.016	0.53 (-0.24 to 1.30)	0.158
Age of child (per year increase)	0.20 (0.01 to 0.39)	0.038	0.07 (-0.06 to 0.21)	0.251
Child Exposure to Traumatic Events				
None reported	0.13 (0.05 to 0.22)	0.006	0.13 (0.01 to 0.25)	0.039
Caregiver's Mental Health Problems				
Srq-20	0.02 (-0.04 to 0.07)	0.574	0.00 (-0.04 to 0.04)	0.866
Area of Residence (Kabul = 0; Pesh = 1)	-0.19 (-0.71 to 0.32)	0.433	-0.47 (-1.15 to 0.22)	0.167
	<i>F-value = 0.0606</i>		<i>F-value = 0.2590</i>	

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