

**Adolescents' Health and Well being: the role of Ethnicity, Built environment and Social Support**

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## **Abstract**

This study adopted both quantitative and qualitative methodologies. It investigated the affect of ethnicity on adolescents well being in light of social and environmental factors. In addition it explored the perceptions of the Palestinian adolescents in Burj el-Barajneh refugee camp regarding the affect of ethnicity on their general well being.

Data used in this study come from the Urban Health Survey that was carried out between 2002 and 2003 in three impoverished communities in the outskirts of Beirut: Naba'a, Hey el-Sullom, and Burj el-Barajneh. A total of 1296 never married adolescents aged 13-19 years were surveyed in the three communities. The current study compared the Palestinian adolescents from Burj el-Barajneh refugee camp (n=575) with their Lebanese counterparts in Naba'a (n= 456) and Hey el-Sullom (n=265). It also used observations and in depth interviews to get the perceptions of Palestinian youth in Burj el-Barajneh refugee camp towards the affect of ethnicity on their general well being.

A model which included ethnicity, built environment and social support measures guided the analysis while controlling for household income, education, Gender and age. The main outcome of the study was the adolescents' well being, measured by two variables, 'health compared to others your age' and 'opportunities compared to others today'. The main independent variable was ethnicity that included Palestinians and Lebanese with the latter being the reference category. Built environment measures included, light in living room and bedroom, humidity, wall and

ceiling cracks, exposure to electric wires and water quality. Social support included reciprocal exchange of favor with family.

Results revealed the significant affect of ethnicity on both outcome variables; 'health compared to others your age' (OR of 3.66 for females and 2.16 for males) and 'opportunities compared to others your age' (OR of 6.31 for females and 10.66 for males). In depth interviews revealed that discrimination was the main theme that explained the relationship between ethnicity and adolescents' well being from the adolescents' perception.

**Keywords:** Adolescents; Health; Ethnicity; Discrimination; Built Environment; Social Support; Palestinian Refugees; Lebanon

## **Adolescents and Health**

Adolescents nowadays represent the largest youth generation in history. They account for nearly half of all people under the age of 25 years, or 1.2 billion individuals. It is thus no wonder that the United Nations Population Fund (UNFPA) chose to focus on adolescents in the year 2003 in an attempt to invest in adolescents' health and rights (UNFPA, 2003). In the Arab region, adolescents represent 11% of the total population and have increased in number from 23 million in the year 1990 to 31 million in 2000 (The Arab Women Development Report, 2003).

The health of adolescents is affected by the environment that surrounds them. This environment can pose serious threats to their physical and mental health especially if the surroundings are characterized by impoverishment, movement to a new community, ethnic or gender discrimination, lack of adequate sanitation, uncontrolled infectious diseases and devastating daily living conditions (Call et al, 2002). Migration for instance, requires adolescents to leave behind their social networks of support whether friends or family and start over and adapt to a new community which may be detrimental to mental health. Familial and social support is important for adolescents to develop resilient and coping skills, among others. In fact, literature suggests that cohesive communities that are rich in emotional and social resources are related to better adolescents' mental health (Call et al, 2002).

Adolescents play an active role in selecting and interacting with their immediate environment contexts, yet they have little or no influence over the macro-societal changes which in turn could affect their health and well-being (Call et al, 2002). Low income and socially deprived communities have dire consequences on children's health and health outcomes in general, especially when the structural and social factors are deeply rooted in the complex political organization of the country

and thus are not directly controlled by individuals and are more likely to affect the poorest people of the society in consideration. (Makhoul et al, 2003).

### **Ethnicity and Health**

The notion of ethnicity came to light by the assumption that cultural variation is sporadic and thus that there are a group of people who share the same culture that distinguishes them from others (Barth, 1969). Since culture is a description of human behavior, a group of people or ethnic units would correspond to this culture (Barth, 1969). The creation of these ethnic units and the nature of boundaries between them are very important. For ethnic boundaries might not necessary be cultural nor territorial but rather social. Social boundaries that are created among the group involve a social life of its own characterized by a complex organization of behavior and social relations; an identity maintained through interaction among its members (Barth, 1969).

“Ethnic identity is a matter of shared self-perception, the communication of that perception to others and perhaps, most crucially, the response it elicits from others in the form of social identity is manifest both as that which is subjectively claimed and as that which is socially accorded.” (Berreman, 1975, as quoted by Marsella, 1994 p.349). Essential components for the persistence of the social ethnic boundaries as significant units are the distinct differences in behavior that distinguishes them from others (Barth, 1969). Moreover, state policies and bureaucracies with respect to civil rights, laws and constitutions also tend to trigger ethnic boundaries over any potential other (Olzak, 1983).

Adolescence is recognized as a key phase of the life span for identity development and formation; a time of exploration and formulation of identities,

including ethnic identity. Development of such identity has been linked to positive psychological constructs such as self esteem, coping style, self efficacy, as well as emotional well being and peer and familial aspects of self concept. (Grieg, 2003).

Discriminatory practices are often linked to ethnic identity or ethnicity. Numerous studies have studied the effect of ethnic discrimination on health in the West (Krieger, 2000; Scott, 2004). Overall, higher levels of self-reported experiences of discrimination were associated with poorer mental health. Literature reveals that people report greater discrimination directed toward their group than toward themselves personally (Krieger, 2000). Few studies however, have addressed ethnic discrimination with health in the East and particularly in the Middle East.

### **Palestinian identity and discrimination as refugees**

According to UNRWA's 2003 annual report, registered refugees in Lebanon were 395,000 in total, of which 224,000 resided in camps, representing 10% of total the refugee population registered by UNRWA. Since they are considered 'foreigners', Palestinian refugees in Lebanon are denied citizenship and residency, real estate ownership, the right to work, social security, health, and free education and are only eligible for 10% of the studying seats in the Lebanese official schools (Zureik,1995; Sayigh,1996, Al-Natour, 2000). In addition, Palestinians are also denied access to Lebanese public health services, and access to hospitalization is inadequate due to the high costs of private Lebanese hospitals and the exclusion of refugees from state hospitals. Thus they mostly rely on UNRWA as the basic provider of health services (Sayigh, 1996).

In summary, Palestinians in Lebanon are restricted to their camps with little interaction with their Lebanese counterparts in either school or work arenas, and are

discriminated against in a variety of sectors, including health, education and occupation. It is thus clear that they are considered a separate group, as a result of socially constructed boundaries, from their Lebanese hosts. Palestinian refugees in Jordan and Syria have not experienced the same fate; instead they have been relatively integrated in their host country society. Therefore the identity and discrimination of Palestinian in Lebanon is not based on “nationality” status but based on social constructs of perceived ethnicity. It is thus appropriate in the context of Lebanon, to label Lebanese versus Palestinian nationalities as different ethnic identities. In addition, as previously stated, ethnic identity is linked to health status, and thus Lebanese and Palestinians are likely to have different perceptions of their health.

### **The Built Environment and health**

According to the United Nations Human Settlements Program (UN-HABITAT), approximately 1 billion people out of a global population close to 6 billion are presently living in slum like conditions (Northridge, Sclar, Biswas, 2003). Thus there has been an increasing interest and concern in how residential and neighborhood environments may affect health.

Literature suggests that the built environment has both direct and indirect effects on mental health. Poor environmental and living conditions are usually associated with poor health (Al- Madi, Y., Uglund, O. Fr., 2003).

### **Social Support and Health**

The effect of social relations on health is both direct and indirect as a buffer to stressful conditions (Heany and Israel, 2002; Jacobson, 1996). Many studies have examined the effect of social support on health and well being generally or and

specifically in relation to adolescents' health and well being in particular. Literature reveals the importance of family, neighborhood and cultural contexts in psychopathology and adolescent development. The presence of family support has been shown to protect high risk youth. It is found to act as a mediating indicator being protective against the development of psychiatric symptomatology in adolescents (Gobert et. al., 2000). Other studies have revealed that post-immigration factors (such as lack of social support networks from own ethnic group, discrimination and unemployment) are associated with psychopathology. Also results have shown the important role of social support in facilitating the day to day coping of poor families (Henly et al., 2003).

### **Conceptual Framework**

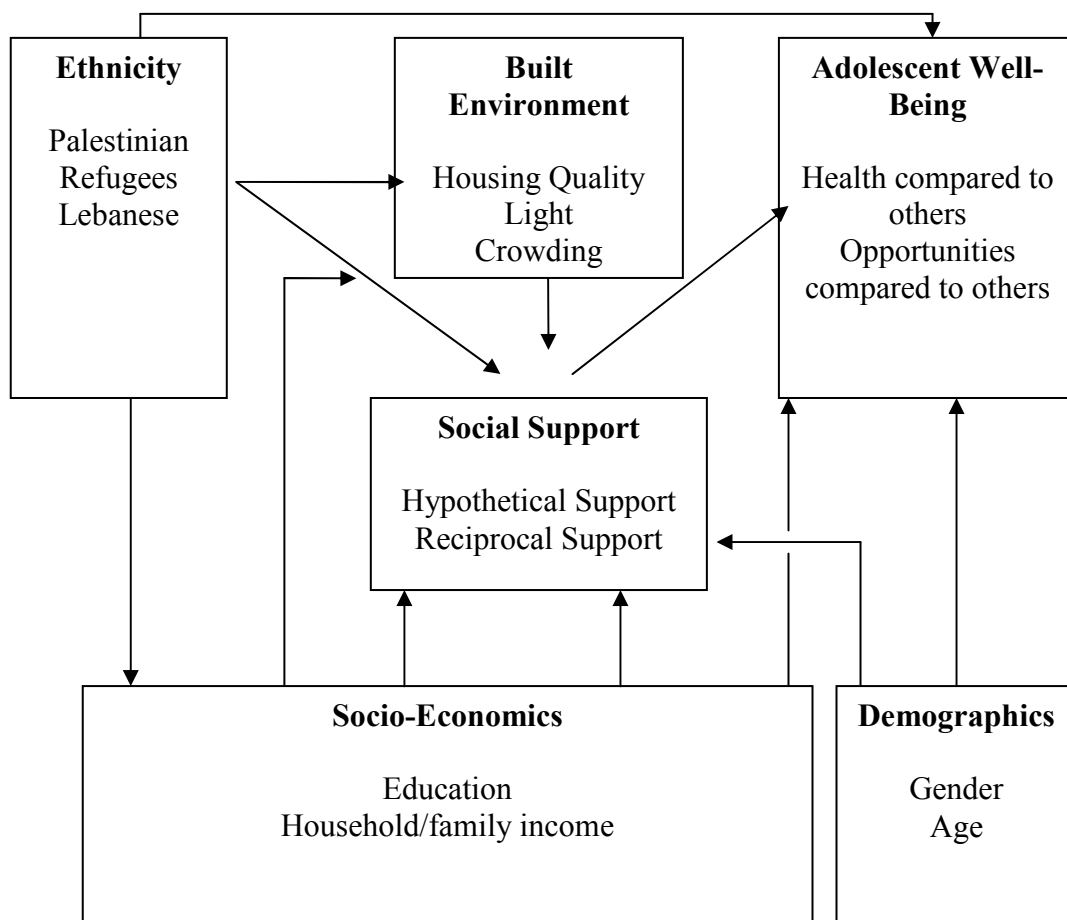
Several models have been considered in studying the relationship between discrimination and/ or ethnicity and health, and between built environment and health. Some of the above have emphasized the role of social support (Northridge et al, 2003; Israel et al, 2002; Krieger, 2000). None, however, have included ethnicity, built environment and social support in one model to investigate its affect on health. Thus conceptualizing the affect of ethnicity on adolescents' well being may follow a process oriented model, where the interaction and transaction between the environment and the individual is emphasized. In such a model both the characteristics of the individual and the environment are important for they act and combine interactively in their effect on the individuals well being (Noor, 1996).

The conceptual framework developed in this study (see figure 1) combined some parts of three conceptual models that were used and or developed by different authors (Northridge et. al., 2003; Israel et. al., 2002; and Krieger, 2000).



Based on the literature, the conceptual model below depicted the direct affect of ethnicity on well being on one hand, and the affect of ethnicity on well being after controlling for social, environmental, demographics and socio-economic factors on the other. As the arrows in the model showed, ethnicity determines one’s socio-economics status, built environment and social support. Socio-economic status affects the built environment, social support and well being. The built environment in turn affects an individual's social support, while social support affects well being. As for demographics, the model portrays that they affect both social support and well being.

Figure (1): Conceptual framework for effect of Ethnicity on Well-Being.



Source: adopted and combined from Northridge et al (2003), Israel et al (2002) and Krieger (2000).

## **The Setting**

Naba'a, Hey el-Sullom and Burj el-Barajneh are the three communities included in this study. Following is a brief description for each community.

### *Naba'a*

Naba'a is a densely populated neighborhood in the Eastern suburbs of Beirut. It is difficult to estimate its exact number of residents for it does not have formal boundaries. The municipality of Borj Hammoud, where Naba'a is located, was originally built to accommodate Armenian refugees before 1975. Over years, and particularly during the war, the demographic landscape changed substantially to include families migrating from rural regions to Beka'a, villages in the south, and areas within Mount Lebanon. Throughout the 1990's Naba'a gained popularity as a destination for foreign workers of nearby Arab countries such as Egypt and Syria, giving the reputation of a swiftly changing, yet accommodating place for migrant workers (Makhoul, 2003).

### *Hey el-Sullom*

Hey el-Sullom is a by-product of the Lebanese civil war. Originally it was an olive grove cultivated by farmers who came to the area from various parts of the country for work. Gradually, these farmers started building tin and wooden houses for shelter during their stay. With the outbreak of the war, Hey el-Sullom burgeoned into a bustling area as Shiite Muslims from the South escaped their volatile region for more stability and economic opportunity closer to Beirut. They mostly took jobs in local factories in nearby Choueifat and their living conditions were relatively good. In the 1990s, however, many residents were fired from their jobs and replaced with Syrian workers who accepted lower wages. Having adjusted to their new homes, the majority of the displaced Lebanese decided to stay. To this day, there are

neighborhoods in Hey el-Sullom that carry the names of these residents' villages of origin from the South (Makhoul, 2003).

### *Burj el- Barajneh*

Residents of the camp are mostly Palestinian refugees who were forced to leave their homes beginning in 1948. After temporarily settling in the south of Lebanon for a year, these families were subsequently moved to the Burj el-Barajneh camp established by UNRWA in 1949. Refugees continued to arrive at the camp in waves thereafter. In recent years, other socially and economically deprived groups such as migrant workers have also—albeit informally—laid claim to the camp as their residence since it is a more affordable option for those who cannot make ends meet in other parts of Lebanese society. Since Palestinians are formally excluded from the labor market, however, the presence of migrant workers adds stiff competition to already difficult economic circumstances (Makhoul, 2003).

All the three communities are densely populated areas. There are between 9,000-12,000 inhabitants in Naba'a in an area of 3 km<sup>2</sup>, 100, 000- 120,000 in Hey el-Sullom (Makhoul, 2003); and between 14,000-20,000 inhabitants in Burj el-Barajneh in a 1.6 km<sup>2</sup> area (Makhoul, 2003; UNRWA, 2003b).

“Although the three communities share common socio-economic features such as economic hardship and low income, they differ in their ethnic and religious make up. For instance, while Naba'a and Hey el-Sullom house a predominantly Lebanese population, Burj el-Barajneh consisted of mostly Palestinian refugees. Moreover, Naba'a is 80% Christian, whereas nearly all the inhabitants of Hey el-Sullom and Burj el-Barajneh communities are Muslim. Of the three communities, Burj el-Barajneh is the most disadvantaged in terms of income and other dimensions of living conditions, since Palestinian refugees are a socially excluded group in

Lebanon, with no official access to public services or the formal labor market” (Khawaja et al, 2004, p.4).

The emphasis in this study was on the Palestinian refugees in Burj el-Barajneh camp contrasted to their Lebanese counterparts in Naba’a and Hey el-Sullom with respect to their overall well being. Adolescents were the study’s target population.

This study included two phases: a quantitative study followed by a qualitative one. However, only the quantitative study will be presented in this paper.

## **Data and Methods**

### **Quantitative Methodology**

Data used in this phase comes from a comprehensive Urban Health Survey (UHS) that was carried out between 2002 and 2003 by the Center for Research on Population and Health (CRPH) at the American University of Beirut, Faculty of Health Sciences. It collected demographic, social, economic, and health information from three impoverished communities in the outskirts of Beirut: Naba’a, Hey el-Sullom and Burj el-Barajneh. Communities were selected in a variety of practical and substantive grounds such as overall poverty conditions, lack of infrastructure, presence of rural immigrants or displace populations, ease of sampling and household listing and proximity to Beirut proper. The survey instrument went through several iterations and was pilot tested at an adjacent neighborhood. It was approved by the University Research Board.

The UHS was based on an initial probability sample of some 3300 households, a total of 2816 households were completed from the three communities. Naba’a consisted of 1101 households; Hey el-Sullom had 650 households; and Burj

el-Barajneh had 1065 households. A total of 1296 never married adolescents aged 13-19 years were surveyed in the three communities after obtaining the consent of both parents or guardians and the adolescents themselves. The response rates vary by neighborhood with 96.4% in Burj el-Barajneh, 85.6% in Naba'a and 71% in Hey el-Sellom. The average response rate for the adolescent study was 84.8%.

The original ethnicity variable included, Palestinians, Lebanese and others as categories. The current analysis was restricted only to Palestinians and Lebanese since they were the focus of the paper. The 'others' category was deleted (comprised only 5% of the total sample and thus didn't affect the analysis).

### *Quantitative Measures*

Two dependent variables of well being were used in this study: 'health compared to others' and 'opportunities today compared to others' (when checking the associations between social well being and the independent variables, the results were not significant and thus the decision of disregarding the social well being dimension /the WHO definition of health was taken). Both outcome variables took a comparative perspective rather than an absolute one. 'Health compared to others your age' was measured using the following question: "In general would you rate your health as better, same or worse than others your age?" This item was coded into a binary measure (1= same/worse health compared to others; 0= better health compared to others). 'Opportunities today compared to others' was assessed in this study using the question "would you rate your opportunities today as better, similar or less than others your age?" The items were dichotomized (1= less opportunities compared to others; 0= better/similar opportunities compared to others).

The main independent variable was ethnicity, Palestinians and Lebanese. Built environment was measured using eight variables in total grouped under 3 main headings; Household quality, light and the crowding. All these correspond to the literature, and were chosen accordingly. Crowding however, was disregarded since there was little variance (most of the households were already crowded). The following variables were included in household quality: wind/ventilation, humidity, wall cracks, ceiling cracks, exposed electric wires and household usage water quality; all these variables were dichotomous (1= yes, as being exposed to ventilation for instance; 0= no, not exposed). The household usage water quality was dichotomized (1= not clear; 0= clear). As for the light, the following were included, need light in living room, and need light in bedroom and both are dichotomous (1= yes, as in need light during day; 0= no, as in light not needed during the day). Associations were conducted between all these built environments variables to make sure that each variable is adding meaning, and to ensure no redundancy.

Social support was measured using the reciprocal (actual) social support measures. The hypothetical (perceived) social measure showed no significance and thus was disregarded. The reciprocal social measure had four variables, give support to friends, receive support from friends, give support to relative and receive support from relative. All these eventually were grouped into two variables, reciprocal satisfaction from friends and reciprocal satisfaction from relatives, in order to portray more meaningful results. However, the reciprocal support from friends showed no significance and thus was disregarded.

Demographic and socio-economic status control variables included age categorized into (13-15 years) and (16-19 years), education completed (primary, intermediate/secondary), current enrollment in school (yes/no), and levels of

household income (<3600, 3600-6000,>3600) adjusted for household size using the Organization for Economic Cooperation and Development (OECD) equivalent scale. Age was first categorized into 13-14 years and 15-19 years. However, no differences were evident between these age groups with respect to the outcomes. Thus the age group for analysis remained to be 13-15 years and 16-19 years.

### *Quantitative Analysis*

Univariate descriptive statistics were first calculated for the variables used in this study followed by bivariate analysis using  $\chi^2$  tests where the associations between the two outcomes of interest, health compared to others and opportunities compared to others and that of the built environment and social support measures were tested. Unadjusted odds ratios and associated 95% confidence levels were calculated from binomial logistic regressions for the associations between the health compared to others and the opportunities compared to others and each independent variable. Decision of inclusion and or exclusion of variables at this phase were based on the variables' association with the outcome. Some variables were negatively associated with the outcome and thus were removed from the analysis. These variables included, crowding and ventilation from the built environment variables, hypothetical support and reciprocity with friends from the social support variables. Moreover, given the analysis of interaction between gender and some independent variables, results were reported separately by gender. Finally, the logistic regression model was used to check the odds ratios of the associations between outcomes and covariates and their 95% confidence intervals adjusting for built environment, social support, income and education. It is worth noting that the data was weighted to adjust for non-response

compared to the household data. Analysis of data was performed using SPSS statistical program, version 11.0 for MS windows.

### **Qualitative Methodology**

I was interested in Palestinian adolescents perception of the effect of their ethnicity on their general health and well being, thus I used an ethnographic design to capture this perception. Ethnography allows one to obtain an insiders' view by understanding people's perceptions of their own living environment and by observing them in their natural settings (Kellehear, 1993). I did that utilizing observations and in-depth, semi-structured interviews as tools for data collection. Observation is an informal information gathering tool in which the researcher acts as an "observer-as-participant", collecting data from the field by looking, listening, experiencing, and taking mental notes of the setting and its people. The in-depth interview is an ethnographic-inductive qualitative research method, designed to describe, analyze, and understand people's experiences and the meanings they ascribe to their lives or surroundings, through a conversation between the interviewer, and the interviewee, with a purpose in mind (Kellehear, 1993; Creswell, 1994).

I collected and analyzed data from Burj el-Barajneh camp over a period of one month. Methods included participant observation and interviews where the collection of data was concurrent, led by the data analysis and persisted till saturation of data was established. Saturation means that the data from the in depth interviews are not identifying any new themes and explanations but rather are the same as the data already obtained. I conducted about 22 interviews with youth of both genders between the ages of 13-19 years. I recorded the interviews, transcribed them verbatim and rechecked by listening to interviews and comparing the transcriptions.



### *Access and Entry*

Access to the research site was facilitated by a Non-Governmental Organization (NGO) called “Beit Atfal Assumoud” that was established in 1976 to provide cultural, educational, health and financial support for Palestinian children and their families. It provided the site where I conducted interviews with youth participants that come during their days off from school to participate in activities given by “Beit Atfal Assumoud”. Later on access to other youth was facilitated by the youth themselves and by the relationship that was established between us, where interviews were conducted in their houses. Through understanding my participants’ natural settings I can better understand their perceptions, values, and ideologies, knowing that I am part of the research process (Holloway, 1997; Neuman, 1994; Hammersley, 1992). Meanings are created through the interaction between me and the participants while continuously acknowledging my own values and beliefs. (Jansen, Roe Davis 1998; Hertz, 1997).

An official introduction letter written in Arabic describing the purpose and procedures of the research was presented. I made sure of the agreement of my participants prior to engaging in any form of conversation or observation by explaining to them in a simple way and through an introductory letter what it is exactly that I am about to pursue, and that they are free to make their decisions of whether or not to cooperate. In addition, confidentiality and privacy of the participants was guaranteed. Formal interviews were recorded upon the consent of the participants (most consented) as communication was conducted in colloquial Arabic. It is important to note that I empathized with the participants throughout the research process given the sensitive topic in order to avoid any potential unethical behavior.

### *Sampling Strategy*

Theoretical sampling was adopted, where informants were selected based on their theoretical attributes that were deemed relevant and contributed to the emerging categories and explanation (Strauss, Corbin, 1990). Thus informants were adolescents living in the Palestinian camp that were first identified in “Beit Atfal Assumoud” and later by others in their houses which depended on the relationship that research is conducted (McMichael, 2003).

### *Thematic Analysis*

Analysis of data is a concurrent and on-going process that starts from the onset of the research. During observations, researchers start noticing patterns, familiarizing themselves with the data, building trust and rapport with it, coming up with themes as they emerge from raw data, drawing frameworks of the emerging themes and gradually coming up with different categories or classifications (Ritchie, Spencer, 2002). I used thematic analysis to analyze the interviews and field notes. In this technique, the richness of data guides the analysis rather than prearranged rules or the interests of the researcher (Kellehear, 1993).

I grouped the sets of data emerging from the transcriptions into categories and themes on a separate notebook. This helped highlight categories according to recurrent themes. The categories were guided by the discussions that were triggered by the interview schedule and questions. Afterwards, I used matrices to help create visual presentations as well as current and convergent themes across the different interviews which facilitated the analysis afterwards.

## Quantitative Findings

Overall the sample included 50.1% males and 49.9% females; the mean age of the sample was 16 years, with a mean of 7 years and nine months of education, 82.8% living with both parents, and with a family mean income of 8365.6 LL per year. Only 14.5% reported having better health compared to others, and 31.1% had similar or better opportunities as others their age.

Table 1 shows the associations between ethnicity and the 'health compared to others', 'opportunities compared to others', built environment and social support measures. All associations proved statistically significant at  $p < 0.005$  with the exception of gender and years of schooling (0.310 and 0.187) respectively. About three fourths of the adolescents in the sample have either completed intermediate or secondary schooling and this percentage is similar for Lebanese and Palestinians. Differences are evident; however, with respect to current school enrollment: only 54% of the Palestinian youth are currently enrolled as opposed to 72.3 % Lebanese. Over 70% of the Lebanese youth live in households with yearly incomes greater than 6,000,000 LL, as opposed to only 37% of the Palestinian youth. There is also a big difference with respect to perceived opportunities: 68.9% of the Palestinians reported less opportunities than others compared to only 18.8% of their Lebanese counterparts. As with respect to the health compared to others, the Palestinians also reported same/worse health compared to the Lebanese but with less difference, 91.9% and 80.3% respectively. Furthermore, the built environment variables at all levels showed that the Palestinians live in worse off conditions. As for the social reciprocity with family, Palestinians reported more exchanges compared to their Lebanese counterparts, 42.5% and 19.9% respectively. All associations between ethnicity and the health compared to others, opportunities compared to others, built environment

and social support measures proved statistically significant at  $p < 0.005$  level with the exception of gender and years of schooling (0.310 and 0.187) respectively.

Table 2 shows the results at the bivariate level for both outcomes. ‘Opportunities compared to others’ and ‘health compared to others’. Only the variables that have an  $OR > 1$  were kept for analysis at the multivariate level. Yet if one looks at the statistical significance, it seems obvious that there are some differences between both outcomes. Built environment variables for instance are significant for the ‘opportunities compared to others’, with the exception of crowding and humidity. This is not the case for the ‘health compared to others’ outcome, however, where none are significant. In addition, in terms of OR, there is also a difference between both outcomes as far as ethnicity is concerned, with a higher OR for the ‘opportunities compared to others’ outcome (9.51 compared to 2.80 in the ‘health compared to others’ outcome).

Table 3 shows the results of regression model by gender (due to interaction between outcome and independent variables that was linked to gender) that examined the independent effect of ethnicity on health with the ‘opportunities compared to others’ as the outcome and the built environment and the social support measures as predictors while controlling for education and household income. Results indicate that ethnicity remained the main significant predictor of perceived opportunities compared to others for both genders with a bit higher significance for males. Palestinians were 6.31 and 10.66 times more likely to report having less opportunities compared to others than Lebanese (95% CI = 4.01-9.92) and (95% CI = 6.58-17.26) for females and males respectively. The built environment variables were not significant for both male and female adolescents. Current enrolment was significant for both genders: female adolescents who were not enrolled were 2.13 times more likely to perceive

less opportunities compared to those enrolled (95% CI = 1.39-3.27) and male youth were 2.21 times more likely to perceive less opportunities compared to males who were enrolled (96% CI = 1.42-3.44). Household income was significant for males while social familial support and electric wires exposure were significant for females.

Table 4 shows the regression models results by gender for ‘health compared to others’. Similar to the ‘opportunities compared to others’ indicator, the ‘health compared to others’ indicator of adolescents was mainly determined by ethnicity for both genders. Palestinian females were 3.66 times more likely to perceive same or worse health compared to others their age than Lebanese females (95% CI = 1.86-7.19), and Palestinian males were 2.16 more likely to perceive same or worse health than their Lebanese counterparts (95% CI = 1.25-3.75). Moreover as with respect to the built environment and social familial support, these were not significantly related to the indicator of health compared to others with the exception of the exposure to electric wires and ceiling cracks in males.

## **Qualitative Findings**

### *Physical Setting*

Our social world is full of multiple realities, and perhaps we cannot obviously see this in our chaotic daily lives, yet this was my first observation as I stepped into Burj el-Barajneh refugee camp, coming from “Hamra” in Beirut. The first thing that I noticed is the telephone and electricity wires that were all over the place, a special feature of the camp along with the cement houses. As one steps forward, one enters into a whole different community and culture that is shaped by its people due to the difficult situation they live in, and their inability to work outside of

the camp. They form a sort of self sufficient community where leaving the camp would occur only in urgent situations. This was revealed by the different shops I passed by; hairdressers, falafel shops, mini markets, clothes and shoe places, bakeries with nice scents that filled the air, and fruit and vegetable shops. While passing by one of those vegetable stores, I couldn't help but notice, the disabled man that was selling the vegetables, he sat on a wheel chair, a lady probably his sister or wife, passed by him touched him on the shoulder, he in return touched her hand and they exchanged smiles, their body language revealed that they loved and supported each other even within these difficult living conditions, as if there is still a window of hope, a small place for love and social support among this sad reality.

“Haifa” hospital is the only health provider in the camp in addition to the UNRWA clinic that was immediately identified from its blue color. As I moved away from the camp's entrance, roads got narrower; they reached a place where only one at a time can pass through, water pipes were another road feature, yet there were roads that flooded with water from the broken pipes. Another observation was the humidity and the lack of ventilation that covered the place; houses were very close to one another, with windows of separate houses facing each other indicating a lack of privacy. Some areas had a terrible smell of garbage.

Children of the camp have no place to play, their only sort of playground were the camp's narrow and tiny roads that were unhealthy and dangerous for children that need wide and clean places to set free their energies. One can tell the different socioeconomic statuses (SES) of camp residents through the clothes that they wear and especially through those of their children. It was pretty obvious that there were different SES within the camp itself. I recall passing by these cute and sweet children, two girls and a boy, they were so welcoming and they asked if I was lost and

offered to show me the way, by asking “wein beddek trooh’i”. Their dresses were generally clean and in good shape, it looked they were among the better SES families, their house as well looked better with wider space.

Social networks are very strong and all people know each other, I was totally identified as a newcomer to the camp which was obvious from the people’s looks and facial expressions. Nevertheless they were friendly and welcoming which is obvious from the general feature of open house doors. Though I was looked at weirdly by some, this generally fades after exchanging hellos, smiles or “ya’teekom il a’fyeh”.

#### *Effect of Ethnicity on adolescents general well being*

Thematic analysis of data gave rise to one major theme which is the problem of discrimination. Under this major theme several recurring themes came up which were a result of discrimination, these included unemployment (denial from 73 professions), inability to get good education, hopelessness and frustration, social comparison, and insecurity. Below is an explanation of each theme separately.

Recurrent Themes across Interviews:

#### *Discrimination*

It seems that the root of the problem lies in a shared feeling of collective discrimination against them being Palestinians, and this discrimination manifests itself at two levels, one is the broad political and policy level, shaped by their inability to work in 73 professions, inability to have property, good education, and good shelters. “I feel like a refugee I don’t have rights in this country I have nothing, I work, suffer and do thousand of things but I am still where I am in the same camp” (18 year old male).

“In this camp and in Lebanon in particular, I don’t consider myself living, I don’t consider myself living like the rest of the people in the world are living. People tell you, you are Palestinian you have nothing in this life” (17 year old female).

The other level of discrimination is at the community or individual level, where it is valid among Lebanese who look down upon them and make them feel outcasts and unwelcome. Moreover, most of the participant’s didn’t have many Lebanese friends and they felt that they were looked down upon and discriminated against. The relationships between them and the Lebanese were if existent very superficial and not close, there was a shared feeling of resentment and discrimination of the Lebanese towards the Palestinians. This in turn results in alienation from the outside world, which is the community outside the camp’s premises. This was revealed many times in the interviews where they used the word outside “barra” to imply the Lebanese community outside the camp

“We and the Lebanese are not equal at all; we have no one in this world” (17 year old female).

“When they know that you are Palestinian, they look down at you, enslave you on purpose and look at you as if they are better than you” (14 year old female).

“Three fourth of us are not living, we live in a society where we are not wanted” (14 year old female).

“Some tell us, ‘you Palestinians are like the Jews to us that’s how we look at you’; I feel I am completely alienated” (19 year old female).

“When a confrontation happens between a Lebanese and a Palestinian, the Lebanese gets away with it easily, the Palestinian however has to go through courts, and a thousand story and story unless he has ‘wasta’ ” (17 year old male).



Others however, though few stated, that they had some Lebanese friends that they were on very good terms with and felt no difference in treatment.

“I have a Lebanese friend that is like a brother to me, we are very close, he almost lives with us here in the camp” (16 year old male)

“Why do people have everything and have rights, why it is that I the Palestinian have nothing” (18 year old male).

A recurring theme that is directly pertinent to discrimination is the spread of drugs including tobacco among the adolescents, as a way to forget the concerns accompanied by their unemployment and their complete way of living. Though it is still not that prevalent, yet it poses serious threats to health and social problems and suggests the need for intervention before its too late.

“You look around and find the small children smoking, this is because no one cares for the older youth and the small children usually look at the older and follow their behaviors” (17 year old male).

“Three fourth of the Palestinian youth drinks and smokes arguileh out of boredom and lack of employment that is only available for Lebanese and Syrians and this in turn affects their psychological health and well being” (17 year old male).

“Some youth are on drugs which affect their health and jeopardize the health of other youth; some households have six or seven unemployed individuals that use drugs as a way to forget and run away from reality” (19 year old male).

Another theme directly pertinent to discrimination is lack of equality in treatment, participants stated that they had less opportunities compared to Lebanese their age and this was deemed as a result of discrimination against them,

“Only 1% of our dreams come true, and they always say why our dreams come late, that is if they even come at all” (14 year old female).

### *Unemployment and insecurity*

Unemployment is a very critical element, for it increased the level of poverty, financial burden, and concerns, especially among the young, there is a continuous fear of threats to securing the future and thus threats to approaching a beloved one and possibly an inability for future potential marriages, or a complete financial dependence on family members or relatives. Working at young ages and thus deprivation from childhood, tenderness and love along with a lot of stress and burden results in psychological problems at an older age. A lack of ability accompanied by an increase in spending and psychological stress causes health problems and diseases. “Palestinians only allowed professions are teachers, social counselors and beggars” (13 year old female).

“One has no other option but joining the informal sector as a mechanic or painter when growing up and remains like this discriminated against; the first thing that our youth think of is perversion ‘nhiraf’ (17 year old male).

“One can’t secure a future here in Lebanon and continues to live unidentified (la’et)” (15 year female).

### *Frustration and hopelessness*

It seems that the adolescents are suffering a lot of psychological problems, there is wide spread of despair among those young category of the population who should normally have great ambitions and hopes for the future.

“I am living here depressed; I have lost hope. Everything that happens in this world is being blamed on the Palestinians and no one knows why” (17 year old male).

“We need someone to stand with the Palestinians to make them feel that they are also human beings, like the Lebanese like the Iraqis and the rest of the world. But by

continuing like this they are depriving us from our dreams and destroying our hopes” (14 year old female).

#### *Lack of good education*

Most of the participants were not satisfied with the educational system or the harsh treatment of some teachers in UNRWA. In fact it was one major reason for their hatred to school and thus high drop out rates. This in effect causes fewer opportunities for them in the future accompanied by their inability to work. It is important to note as well that the fact of denial from work force participation was another reason for drop out rates. There was a shared feeling of lack of benefit from education for employment is forbidden.

“We are living here in a camp that is limited confined, we can’t do anything even education is useless” (19 year old female).

“I feel fed up and have looked at others in my community who are educated but have nothing” (18 year old male).

#### *Social comparison*

Many compared the ways they live with that of the Lebanese and actually mentioned that it causes health problems and frustration. In fact their overall way and place of living was one of the issues that the Lebanese discriminate against They perceived their built environment to affect both their future opportunities and their health status. Built environment was portrayed as not facilitating studying, nor being healthy for living.

“Palestinian youth are very much affected by the environment they live in, unlike the Lebanese who live in a normal environment” (19 year old male).

Moreover, the situation is exacerbated by the lack of clubs or places for outside activities compared to the Lebanese who usually have clubs to socialize. Thus

adolescents invest their energies inside the camps given their inability to leave the camp. The notion of life outside the camp was revealed in interviews through the term outside 'barra' and was alien compared to life inside the camp. Given this adolescents either stay at home or go to internet cafes inside the camp premises to spend their time. This consequently leads to psychological problems, since the same thing is repeated over and over. It is important to note that many of the participants mentioned the internet as their only source of activity, a sort of social gathering, a chance to talk to people and share views and ideas, though there were many that use it in an unhealthy way.

" We are confined and limited here in the camp, there are no activities or clubs for us to go to, our live is like a video movie that keeps repeating itself over and over again, I see this person today , then I will see the exact same person tomorrow and the day after" (19 year old female).

## **Discussion**

This study reports on the effect of ethnicity on adolescents' health status and well being particularly their health compared to others and their opportunities compared to others their age controlling for built environment, social support, years of education and household income. To our knowledge it is the first study of ethnicity and health in the Middle East and the first to focus on the influence of built environment and social support together with ethnicity on the health status and well being of adolescents. The study's strength also comes from the fact that it adopted both quantitative and qualitative methodologies, where ethnographies were used to help explain the effect of ethnicity on adolescents well being. A combination of

methodologies adds rigor, breadth depth and richness to any inquiry (Denzin and Lincoln, 2000).

The main finding of the study is the strength of the relationship between ethnicity and health. In both bivariate and multivariate analysis, ethnicity outweighed all other variables in its influence on health. The influence of ethnicity on health has been documented in the literature but the strength of its relationship in the present study is greater than previously documented. Thus the conceptual framework for this study was not useful for it was shown that the built environment affect was neutralized by the overall effect of ethnicity. Also social support in this context didn't mediate the effect of ethnicity on health as was previously hypothesized. None the less our hypothesis that ethnicity would have an overall negative association with adolescents' health status and well being remained valid.

The quantitative findings at the bivariate level were similar to the general literature on built environment and proved significant with respect to the 'opportunities compared to others'. This was not the case however, for the 'health compared to others', where it was clear that the built environment had no association. Moving to the multivariate level, the built environment had no association with either outcome with the exception of electric wires and ceiling cracks. For example ceiling cracks were significant for females' 'health compared to others' and the electric wires were for males' health .This may be linked to the fact that women spend more time at home than men do and thus are more likely to notice and be bothered by the cracks. Electric wires are present both domestically and in public as the qualitative observation findings revealed. Since men spend more time in the public sphere but still spend some time at home, they may tend to be bothered by the electric wires. As for the opportunities compared to others the electric wires were significant to females,

reasons why are nor clear, but findings from the qualitative study revealed that disadvantaged built environments affects adolescents future opportunities and health compared to others their age, and according to them were results of their ethnicity. Had it been that they were not Palestinian refugees may have meant better built environment.

Literature reveals the importance of social support in facilitating the day to day coping of poor families and views ethnic enclaves or “community of migrants already transplanted into the host society” as a continuous source of social support and a way of reinforcing the sense of identity (Henly et al., 2003; Brody, 1994). However, it was not significant in our quantitative study or a recurring theme in the qualitative part. Qualitative findings reveal a sense of belonging through living in the camp, social support, cooperation and unity among camp residents. Ethnic solidarity, defined as the “conscious identification with a given ethnic population and includes the maintenance of strong ethnic interaction networks and institutions that socialize new members and reinforce social ties” (Olzak, 1983, p.356) was very prevalent in the camp yet it may be that the social support doesn’t overcome compounded social and economic alienation that the Palestinian adolescents suffer from. Literature reveals that families in a non supportive community environment suffer from lack of employment and economic difficulties and thus are not equipped to provide appropriate support for their children. Children in turn don’t receive enough support, thus their psychological well being may not be enhanced (Pittaway, Bartolomei, 2003).

Furthermore, the quantitative study revealed the significant effect of income on males’ opportunities compared to others their age. This is expected given the qualitative findings which showed that males are usually the breadwinners in such a

community. This places financial and economic responsibility on their part accompanied by the lack of work opportunities that ultimately results in depression, frustration and hopelessness.

The qualitative study helped explain the strong significance of the ethnicity on the health and well being of adolescents. Results of the interviews revealed that the primary reason of reporting same/worse health compared to others and less opportunities compared to others is discrimination against them as Palestinians. This manifests itself in different aspects; lack of employment and insecurity, lack of good education, frustration and hopelessness, social comparison.

This discrimination is so strong that it overcomes any impact of the built environment and of social ties, thus neutralizing the effect of such variables, as seen in the qualitative study.

### **Limitations**

The study took place in three impoverished communities that share specific socio-economic and demographic characteristics at the outskirts of Beirut, thus results may not be generalized to neither the Lebanese nor the Palestinian youth. On the other hand it may give insight to youth in similar conditions especially the Palestinian refugee youth in Lebanon. Moreover, the study is cross-sectional and thus restricts our ability to make causal inferences regarding the effect of ethnicity on the health and well being of adolescents. However, reverse causation is unlikely in this particular case.

Carrying out social research always entails ethical considerations with respect to the actual research process and the participant populations; rarely however has the affect of the research process on the researcher been considered (McMichael, 2003). I was faced with this dilemma of hearing all these sad conditions that the youth

were going through and wanting to do all that I can to help improve their condition. The fact that I am Palestinian myself may have biased my research in some ways, yet it also strengthened it for it facilitated my entry into the camps and youth were more at ease talking to me.



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**Table 1. Percent Distribution of adolescents' age 13-19 year, Opportunities and Health compared to others, Built Environment and Social Support by selected characteristics Urban Health Survey, 2003**

| Concept and Indicator                                  | Total (%) | N    | Ethnicity   |          | P-value |
|--|-----------|------|-------------|----------|---------|
|  |           |      | Palestinian | Lebanese |         |
| <b>Socio-Demographics</b>                              |           |      |             |          |         |
| <i>Years of Schooling</i>                              |           |      |             |          |         |
| - Primary  | 24.7      | 317  | 26.5        | 23.3     | 0.187   |
| - Intermediate/Secondary                               | 75.3      | 968  | 73.5        | 76.7     |         |
| <i>Current School Enrolment</i>                        |           |      |             |          |         |
| - Yes  | 64.3      | 828  | 54.2        | 72.3     | 0.000   |
| - No   | 35.7      | 459  | 45.8        | 27.7     |         |
| <i>Household income, LL (000)</i>                      |           |      |             |          |         |
| - <3600  | 21.0      | 272  | 37.6        | 8.0      | 0.000   |
| - 3600-6000  | 23.3      | 301  | 27.9        | 19.6     |         |
| - >6000  | 55.7      | 721  | 34.4        | 72.4     |         |
| <i>Gender</i>  |           |      |             |          |         |
| - Male   | 50.1      | 648  | 51.7        | 48.8     | 0.310   |
| - Female   | 49.9      | 646  | 48.3        | 51.2     |         |
| <i>Age</i>   |           |      |             |          |         |
| - 13-15 yrs  | 42.7      | 553  | 43.4        | 42.1     | 0.634   |
| - 16-19 yrs  | 57.3      | 743  | 56.6        | 57.9     |         |
| <i>Opportunities today compared to others your age</i> |           |      |             |          |         |
| - better/similar opportunities as other                | 58.8      | 735  | 31.1        | 81.2     | 0.000   |
| - less opportunities than others                       | 41.2      | 515  | 68.9        | 18.8     |         |
| <i>Health compared to others your age</i>              |           |      |             |          |         |
| - better health compared to others                     | 14.5      | 185  | 8.1         | 19.7     | 0.000   |
| - same/worse health compared to others                 | 85.5      | 1089 | 91.9        | 80.3     |         |
| <b>Built-Environment</b>                               |           |      |             |          |         |
| <i>Crowding</i>  |           |      |             |          |         |
| - non crowded  | 41.0      | 530  | 43.1        | 39.3     | 0.174   |
| - crowded  | 59.0      | 764  | 56.9        | 60.7     |         |
| <i>Need Light in Living Room</i>                       |           |      |             |          |         |
| - Yes  | 38.4      | 496  | 47.5        | 31.2     | 0.000   |
| - No   | 61.6      | 797  | 52.5        | 68.8     |         |
| <i>Need Light in Bedroom</i>                           |           |      |             |          |         |
| - Yes  | 44.3      | 572  | 51.0        | 39.0     | 0.000   |
| - No   | 55.7      | 720  | 49.0        | 61.0     |         |
| <i>Ventilation</i>                                     |           |      |             |          |         |
| - Yes  | 86.5      | 1116 | 84.1        | 88.4     | 0.026   |
| - No   | 13.5      | 174  | 15.9        | 11.6     |         |
| <i>Humidity</i>  |           |      |             |          |         |
| - Yes  | 60.9      | 787  | 65.9        | 57.0     | 0.001   |

|  |      |      |      |      |       |
|--|------|------|------|------|-------|
| - No   | 39.1 | 505  | 34.1 | 43.0 |       |
| <i>Wall Cracks</i>                             |      |      |      |      |       |
| - Yes  | 56.7 | 732  | 66.8 | 48.7 | 0.000 |
| - No   | 43.3 | 560  | 33.2 | 51.3 |       |
| <i>Ceiling Cracks</i>                          |      |      |      |      |       |
| - Yes  | 41.4 | 534  | 52.7 | 32.5 | 0.000 |
| - No   | 58.6 | 755  | 47.3 | 67.5 |       |
| <i>Electric Wires</i>                          |      |      |      |      |       |
| - Yes  | 21.7 | 280  | 31.1 | 14.2 | 0.000 |
| - No   | 78.3 | 1013 | 68.9 | 85.8 |       |
| <i>Water Quality</i>                           |      |      |      |      |       |
| - Clear  | 45.3 | 583  | 20.6 | 65.0 | 0.000 |
| - Not Clear                                    | 54.7 | 703  | 79.4 | 35.0 |       |
| <b>Social Support</b>                          |      |      |      |      |       |
| <i>Hypothetical Social Support</i>             |      |      |      |      |       |
| - no one                                       | 7.1  | 92   | 1.4  | 11.6 | 0.000 |
| - someone                                      | 92.9 | 1199 | 98.6 | 88.4 |       |
| <i>Reciprocity</i>                             |      |      |      |      |       |
| - Exchanging favour<br>with friends last month |      |      |      |      |       |
| - any exchange                                 | 29.1 | 376  | 26.0 | 31.5 | 0.030 |
| - no exchange                                  | 70.9 | 916  | 74.0 | 68.5 |       |
| <i>Reciprocity</i>                             |      |      |      |      |       |
| - Exchanging favour<br>with family last month  |      |      |      |      |       |
| - any exchange                                 | 29.9 | 386  | 42.5 | 19.9 | 0.000 |
| - no exchange                                  | 70.1 | 906  | 57.5 | 80.1 |       |

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**Table 2. Unadjusted odds ratios for Adolescents Opportunities and Health compared to others, Urban Health Survey, 2003**

| Independent Variables            | Less opportunities compared to others |              |         | Same/Worse health compared to others |             |         |
|----------------------------------|---------------------------------------|--------------|---------|--------------------------------------|-------------|---------|
|                                  | OR                                    | 95% CI       | p-value | OR                                   | 95% CI      | p-value |
| <i>Ethnicity</i>                 |                                       |              |         |                                      |             |         |
| - Palestinian                    | 9.51                                  | 7.32 - 12.35 | 0.000   | 2.80                                 | 1.96 - 3.99 | 0.000   |
| - Lebanese                       | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <b>Socio-Demographics</b>        |                                       |              |         |                                      |             |         |
| <i>Current School</i>            |                                       |              |         |                                      |             |         |
|                                  | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <i>Enrolment</i>                 |                                       |              |         |                                      |             |         |
|                                  | 2.80                                  | 2.20 - 3.56  | 0.000   | 1.06                                 | 0.76 - 1.48 | 0.696   |
| - Yes                            |                                       |              |         |                                      |             |         |
| - No                             |                                       |              |         |                                      |             |         |
| <i>Years of Schooling</i>        |                                       |              |         |                                      |             |         |
| - Primary                        | 1.28                                  | 0.98 - 1.66  | 0.063   | 1.16                                 | 0.80 - 1.68 | 0.432   |
| - Intermediate/<br>Secondary     | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <i>Household income</i>          |                                       |              |         |                                      |             |         |
| - <3600 LL                       | 3.99                                  | 2.96 - 5.37  | 0.000   | 2.09                                 | 1.33 - 3.29 | 0.001   |
| - 3600-6000 LL                   | 2.22                                  | 1.67 - 2.94  | 0.000   | 1.59                                 | 1.06 - 2.38 | 0.024   |
| - >6000 LL                       | 1.00                                  | -            |         | 1.00                                 | -□          |         |
| <i>Gender</i>                    |                                       |              |         |                                      |             |         |
| - Male                           | 1.00                                  | -            |         | 1.00                                 | -           |         |
| - Female                         | 1.01                                  | 0.80 - 1.26  | 0.913   | 1.24                                 | 0.90 - 1.70 | 0.175   |
| <i>Age</i>                       |                                       |              |         |                                      |             |         |
| - 13-15 yrs                      | 0.82                                  | 0.65 - 1.03  | 0.090   | 1.33                                 | 0.96 - 1.83 | 0.081   |
| - 16-19 yrs                      | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <b>Built Environment</b>         |                                       |              |         |                                      |             |         |
| <i>Crowding</i>                  |                                       |              |         |                                      |             |         |
|                                  | 1.00                                  | -            |         | 1.00                                 | -           |         |
| - un crowded                     | 0.94                                  | 0.75 - 1.19  | 0.645   | 1.03                                 | 0.75 - 1.41 | 0.841   |
| - crowded                        |                                       |              |         |                                      |             |         |
| <i>Need Light in Living Room</i> |                                       |              |         |                                      |             |         |
|                                  | 1.58                                  | 1.25 - 1.99  | 0.000   | 1.34                                 | 0.96 - 1.87 | 0.077   |
| - Yes                            | 1.00                                  | -            |         | 1.00                                 | -           |         |
| - No                             |                                       |              |         |                                      |             |         |
| <i>Need Light in Bedroom</i>     |                                       |              |         |                                      |             |         |
|                                  | 1.38                                  | 1.10 - 1.74  | 0.005   | 1.10                                 | 0.80 - 1.51 | 0.526   |
| - Yes                            | 1.00                                  | -            |         | 1.00                                 | -           |         |
| - No                             |                                       |              |         |                                      |             |         |
| <i>Ventilation</i>               |                                       |              |         |                                      |             |         |
|                                  | 0.54                                  | 0.39 - 0.75  | 0.000   | 0.82                                 | 0.51 - 1.34 | 0.440   |
| - Yes                            | 1.00                                  | -            |         | 1.00                                 | -           |         |
| - No                             |                                       |              |         |                                      |             |         |
| <i>Humidity</i>                  |                                       |              |         |                                      |             |         |
| - Yes                            | 1.27                                  | 1.00 - 1.60  | 0.044   | 1.15                                 | 0.84 - 1.58 | 0.374   |
| - No                             | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <i>Wall Cracks</i>               |                                       |              |         |                                      |             |         |
| - Yes                            | 1.71                                  | 1.35 - 2.16  | 0.000   | 1.28                                 | 0.93 - 1.75 | 0.122   |
| - No                             | 1.00                                  | -            |         | 1.00                                 | -           |         |
| <i>Ceiling Cracks</i>            |                                       |              |         |                                      |             |         |

|   |      |             |       |      |             |       |
|---|------|-------------|-------|------|-------------|-------|
| - Yes                                       | 1.50 | 1.19 - 1.89 | 0.000 | 1.18 | 0.86 - 1.63 | 0.299 |
| - No  | 1.00 | -           |       | 1.00 | -           |       |
| <i>Electric Wires</i>                       |      |             |       |      |             |       |
| - Yes                                       | 1.90 | 1.45 - 2.49 | 0.000 | 1.48 | 0.98 - 2.23 | 0.061 |
| - No  | 1.00 | -           |       | 1.00 | -           |       |
| <i>Water Quality</i>                        |      |             |       |      |             |       |
| - Clear                                     | 1.00 | -           |       | 1.00 | -           |       |
| - Not Clear                                 | 2.74 | 2.16 - 3.48 | 0.000 | 1.25 | 0.91 - 1.71 | 0.157 |
| <b>Social Support</b>                       |      |             |       |      |             |       |
| <i>Hypothetical Social Support</i>          |      |             |       |      |             |       |
|   | 1.00 | -           |       | 1.00 | -           |       |
| - no one                                    | 0.48 | 0.29 - 0.78 | 0.480 | 0.37 | 0.22 - 0.60 | 0.000 |
| - someone                                   |      |             |       |      |             |       |
| <i>Reciprocity</i>                          |      |             |       |      |             |       |
| - Exchanging favour with friends last month | 0.57 | 0.44 - 0.74 | 0.000 | 0.61 | 0.44 - 0.85 | 0.004 |
| - any exchange                              | 1.00 | -           |       | 1.00 | -           |       |
| - no exchange                               |      |             |       |      |             |       |
| <i>Reciprocity</i>                          |      |             |       |      |             |       |
| - Exchanging favour with family last month  | 1.46 | 1.14 - 1.87 | 0.002 | 0.78 | 0.56 - 1.09 | 0.151 |
| - any exchange                              | 1.00 | -           |       | 1.00 | -           |       |
| - no exchange                               |      |             |       |      |             |       |

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**Table 3. Unadjusted and adjusted odds ratios for Opportunities compared to others by Gender, Urban Health Survey, 2003**

| Independent Variables                      | Less Opportunities compared to others<br>Odds Ratios (95% CI) |                    |         |                      |                      |         |
|--|---|--------------------|---------|----------------------|----------------------|---------|
|  | Females   |                    |         | Males                |                      |         |
|  | Unadjusted  | Adjusted           | p-value | Unadjusted           | Adjusted             | p-value |
| <i>Ethnicity</i>                           |   |                    |         |                      |                      |         |
| - Palestinian                              | 7.89 (5.48 - 11.34)   | 6.31 (4.01 - 9.92) | 0.000   | 11.76 (8.04 - 17.20) | 10.66 (6.58 - 17.26) | 0.000   |
| - Lebanese                                 | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <b>Socio-Demographics</b>                  |   |                    |         |                      |                      |         |
| <i>Current School Enrolment</i>            |   |                    |         |                      |                      |         |
|  | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| - Yes                                      | 2.62 (1.83 - 3.75)  | 2.13 (1.39 - 3.27) | 0.001   | 3.10 (2.23 - 4.32)   | 2.21 (1.42 - 3.44)   | 0.000   |
| - No                                       |   |                    |         |                      |                      |         |
| <i>Years of Schooling</i>                  |   |                    |         |                      |                      |         |
| - Primary                                  | 1.21 (0.82 - 1.80)  | 0.85 (0.52 - 1.38) | 0.521   | 1.34 (0.94 - 1.91)   | 0.91 (0.56 - 1.46)   | 0.696   |
| - Intermediate/Secondary                   | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Household income</i>                    |   |                    |         |                      |                      |         |
| - <3600 LL                                 | 3.49 (2.32 - 5.25)  | 1.44 (0.86 - 2.41) | 0.159   | 4.66 (3.01 - 7.21)   | 1.80 (1.04 - 3.11)   | 0.034   |
| - 3600-6000 LL                             | 1.84 (1.23 - 2.76)  | 1.23 (0.75 - 2.00) | 0.403   | 2.68 (1.80 - 3.98)   | 1.66 (1.01 - 2.73)   | 0.045   |
| - >6000 LL                                 | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <b>Built Environment</b>                   |   |                    |         |                      |                      |         |
| <i>Need Light in Living Room</i>           |   |                    |         |                      |                      |         |
|  | 1.72 (1.24 - 2.40)  | 1.20 (0.73 - 1.97) | 0.458   | 1.44 (1.04 - 1.99)   | 1.01 (0.60 - 1.68)   | 0.969   |
| - Yes                                      | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| - No                                       |   |                    |         |                      |                      |         |
| <i>Need Light in Bedroom</i>               |   |                    |         |                      |                      |         |
| - Yes                                      | 1.44 (1.04 - 1.99)  | 0.97 (0.60 - 1.56) | 0.902   | 1.34 (0.97 - 1.85)   | 1.10 (0.65 - 1.86)   | 0.699   |
| - No                                       | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Humidity</i>                            |   |                    |         |                      |                      |         |
| - Yes                                      | 1.24 (0.89 - 1.73)  | 0.85 (0.54 - 1.32) | 0.478   | 1.28 (0.92 - 1.79)   | 0.95 (0.60 - 1.51)   | 0.844   |
| - No                                       | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Wall Cracks</i>                         |   |                    |         |                      |                      |         |
| - Yes                                      | 1.58 (1.14 - 2.20)  | 1.20 (0.75 - 1.93) | 0.442   | 1.83 (1.32 - 2.54)   | 1.51 (0.93 - 2.43)   | 0.089   |
| - No                                       | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Ceiling Cracks</i>                      |   |                    |         |                      |                      |         |
| - Yes                                      | 1.45 (1.04 - 2.00)  | 0.85 (0.53 - 1.35) | 0.494   | 1.57 (1.13 - 2.17)   | 0.78 (0.49 - 1.24)   | 0.297   |
| - No                                       | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Electric Wires</i>                      |   |                    |         |                      |                      |         |
| - Yes                                      | 2.35 (1.57 - 3.52)  | 1.77 (1.08 - 2.91) | 0.023   | 1.59 (1.10 - 2.31)   | 0.68 (0.41 - 1.12)   | 0.139   |
| - No                                       | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| <i>Water Quality</i>                       |   |                    |         |                      |                      |         |
| - Clear                                    | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |
| - Not Clear                                | 2.75 (1.95 - 3.86)  | 1.03 (0.66 - 1.60) | 0.889   | 2.73 (1.95 - 3.81)   | 0.88 (0.55 - 1.42)   | 0.624   |
| <b>Social Support</b>                      |   |                    |         |                      |                      |         |
| <i>Reciprocity</i>                         |   |                    |         |                      |                      |         |
| - Exchanging favour with family last month |   |                    |         |                      |                      |         |
| - any exchange                             | 1.34 (0.94 - 1.89)  | 0.85 (0.56 - 1.31) | 0.483   | 1.60 (1.13 - 2.26)   | 0.95 (0.61 - 1.48)   | 0.843   |
| - no exchange                              | 1.00  | 1.00               |         | 1.00                 | 1.00                 |         |





**Table 4. Unadjusted and adjusted odds ratios for Health compared to others by Gender, Urban Health Survey, 2003**

| Independent Variables            | Same/worse health compared to others |                    |         |                    |                    |         |
|----------------------------------|--------------------------------------|--------------------|---------|--------------------|--------------------|---------|
|                                  | Odds Ratios (95% CI)                 |                    |         |                    |                    |         |
|                                  | Females                              |                    |         | Males              |                    |         |
|                                  | Unadjusted                           | Adjusted           | p-value | Unadjusted         | Adjusted           | p-value |
| <i>Ethnicity</i>                 |                                      |                    |         |                    |                    |         |
| - Palestinian                    | 3.77 (2.13 - 6.69)                   | 3.66 (1.86 - 7.19) | 0.000   | 2.29 (1.44 - 3.62) | 2.16 (1.25 - 3.75) | 0.006   |
| - Lebanese                       | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <b>Socio-Demographics</b>        |                                      |                    |         |                    |                    |         |
| <i>Current School Enrolment</i>  |                                      |                    |         |                    |                    |         |
| - Yes                            | 1.41 (0.81 - 2.44)                   | 1.14 (0.63 - 2.06) | 0.644   | 0.94 (0.61 - 1.45) | 0.78 (0.49 - 1.25) | 0.314   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Household income</i>          |                                      |                    |         |                    |                    |         |
| - <3600 LL                       | 2.14 (1.11 - 4.12)                   | 1.16 (0.54 - 2.48) | 0.689   | 2.00 (1.06 - 3.77) | 1.36 (0.65 - 2.69) | 0.435   |
| - 3600-6000 LL                   | 1.61 (0.87 - 2.94)                   | 1.16 (0.61 - 2.20) | 0.640   | 1.57 (0.91 - 2.72) | 1.38 (0.77 - 2.47) | 0.274   |
| - >6000 LL                       | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <b>Built Environment</b>         |                                      |                    |         |                    |                    |         |
| <i>Need Light in Living Room</i> |                                      |                    |         |                    |                    |         |
| - Yes                            | 1.44 (0.87 - 2.38)                   | 1.27 (0.65 - 2.48) | 0.482   | 1.28 (0.82 - 1.99) | 1.16 (0.66 - 2.05) | 0.593   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Need Light in Bedroom</i>     |                                      |                    |         |                    |                    |         |
| - Yes                            | 1.37 (0.86 - 2.21)                   | 1.03 (0.55 - 1.92) | 0.916   | 0.90 (0.59 - 1.39) | 0.77 (0.44 - 1.34) | 0.358   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Humidity</i>                  |                                      |                    |         |                    |                    |         |
| - Yes                            | 1.28 (0.80 - 2.05)                   | 1.10 (0.63 - 1.91) | 0.731   | 1.04 (0.68 - 1.61) | 0.96 (0.58 - 1.57) | 0.881   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Wall Cracks</i>               |                                      |                    |         |                    |                    |         |
| - Yes                            | 1.68 (1.06 - 2.69)                   | 1.62 (0.88 - 2.99) | 0.120   | 1.01 (0.66 - 1.55) | 0.78 (0.47 - 1.29) | 0.335   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Ceiling Cracks</i>            |                                      |                    |         |                    |                    |         |
| - Yes                            | 0.95 (0.59 - 1.52)                   | 0.53 (0.29 - 0.97) | 0.042   | 1.43 (0.92 - 2.24) | 1.27 (0.75 - 2.12) | 0.362   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Electric Wires</i>            |                                      |                    |         |                    |                    |         |
| - Yes                            | 0.83 (0.48 - 1.46)                   | 0.68 (0.35 - 1.31) | 0.252   | 2.62 (1.39 - 4.92) | 2.24 (1.14 - 4.39) | 0.018   |
| - No                             | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| <i>Water Quality</i>             |                                      |                    |         |                    |                    |         |
| - Clear                          | 1.00                                 | 1.00               |         | 1.00               | 1.00               |         |
| - Not Clear                      | 1.37 (0.86 - 2.19)                   | 0.89 (0.51 - 1.55) | 0.687   | 1.15 (.75 - 1.77)  | 0.73 (0.44 - 1.21) | 0.229   |

## APPENDIX

### INTRODUCTION LETTER ONE

My name is Yara Jarallah and I am a student at the faculty of health sciences at the American University of Beirut (AUB). I am currently working on my thesis towards obtaining the Masters of Science degree in Population Health. It is particularly on adolescents' health and well being. It was shown from recent studies on adolescents in Burj el-Barajneh that adolescents perceive their health and opportunities today to be worse than others their age in Lebanon. Therefore in this study I would like to get the adolescents' perception regarding the effect of their ethnicity on their general health and well being.

All information gathered from participants during interviews is for the sole research purpose, will be kept confidential, and there will be no material compensation. I will use the tape recorder throughout the interviews after getting the participants' approval. I would like to ask for your cooperation and help in finding these adolescents if possible, given your experience and knowledge in the area. The target adolescents are both males and females of the age group 13-19 years.

Thank you for your cooperation

Researcher

Yara Jarallah

\* If need arises you can reach me at the following number: 03/088263.

## INTRODUCTION LETTER TWO

My name is Yara Jarallah and I am a student at the faculty of health sciences at the American University of Beirut (AUB). I am currently working on my thesis towards obtaining the Masters of Science degree in Population Health. It is particularly on adolescents' health and well being. It was shown from recent studies on adolescents in Burj el-Barajneh that adolescents perceive their health and opportunities today to be worse than others their age in Lebanon. Therefore in this study I would like to get your perceptions regarding the effect of your ethnicity on your general health and well being. Your answers will be of great help to this study and it will help me get an in-depth view of the adolescents' perceptions with respect to factors influencing their general health and well being.

All interviews and information that you will contribute in are for the sole purpose of the research and there will be no material compensation. You can answer all or part of the questions, your participation is voluntary and you can withdraw any time. Your names will remain confidential and only for the researcher to see and will not be mentioned any where in the study. I will use the tape recorder throughout the interviews for the benefit of its usage after getting your approval.

Thank you for your cooperation

Researcher

Yara Jarallah

## INTERVIEW SCHEDULE

How do you feel as a Palestinian in Lebanon?

What do you think are the advantages for living in Lebanon as a Palestinian?

What do you think are the disadvantages for living in Lebanon as a Palestinian?

How is your relationship with Lebanese your age?

Recent studies conducted in Borj el-Barajneh have shown that adolescents perceive their health and opportunities today to be worse than others their age in Lebanon even after taking built environment into consideration, what is your perception in this regards?

How do you see yourself in a few years from now?

What in your opinion should change for things to improve in your life?