

## **Suicidality in the Arab World Part I: Community Studies**

*Elie G. Karam, Ranya V. Hajjar, Mariana M. Salamoun*

### **الإنتحار في العالم العربي - دراسته مجتمعيه - الجزء الأول**

*إيلي كرم، رانيا حجار، وماريانا سالامون*

#### **Abstract**

This paper reviews published community based studies that assessed suicidality in the Arab world. A search was conducted on several search engines (PubMed, Psychinfo, IDRAAC WEB/CD) up to 2006 (Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Palestine, Saudi Arabia, Sudan and United Arab Emirates). Results varied across countries and methods. In Arab community studies, the prevalence of lifetime suicide ideation varied from a low of 2.09% to a high of 13.9% and the lifetime prevalence of attempts from 0.72% to 6.3%. In about all community studies which assessed lifetime and 12 months suicide, ideation was significantly related to being a female. Twelve month suicide ideation was significantly related to depressive symptoms and experiencing more life events, illnesses and using more tranquilizers/sleeping pills. One month suicide ideation was related to non-married status, not having children and a history of psychiatric disorders, specifically MDD, dysthymia, agoraphobia, OCD and GAD. When compared to female university students, females who were displaced or refugees were significantly more likely to report suicide ideation (within the "past few weeks"). In conclusion, national epidemiological studies are needed to assess the prevalence and risk factors of suicidal behaviors in the Arab World.

**Key Words:** attempted suicide, parasuicide, ideation, suicidal feelings

#### **Introduction**

Data on the prevalence of different suicidal behaviors commonly referred to as suicidality, and the evaluation of significant mental health and socio-demographic risk factors are essential in the efforts needed to prevent such potentially lethal behavior related to suicidality.

Studies that assess the prevalence and risk factors of suicidality are far

more common in the developed countries. Epidemiological studies investigating the prevalence of suicidal behaviors and their correlates in the Arab world are nonexistent on a national level and a rarity in specific Arab communities. In Arab countries, more so than many other areas of the world, suicide and attempted suicide are considered shameful and sinful acts that are

strongly prohibited by religion (Islam and conservative Christianity). Due to those reasons and due to the social and legal consequences associated with suicidal behavior, cases of suicide and attempted suicide are thought to be frequently hidden by the victims and their families.

The present reviews epidemiological reports on the prevalence of suicide ideation, attempts, the socio-demographic, mental health and other risk factors associated with suicidality in the Arab world.

### **Methodology**

Community based studies assessing the prevalence of suicide ideation, plans, gestures, attempts and completed suicide in an Arab country were included in this review. A search was conducted on PubMed, PsycInfo and IDRAAC WEB/CD up to 2006 using the following key words: suicidality, suicidal behavior, suicide ideation, suicide plan, suicidal gestures, attempted suicide, parasuicide, deliberate self-harm, self-harm, and suicide. This search included the Arab world and Arab countries: Algeria, Bahrain, Comoros, Egypt, Gaza, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar; Somalia, Sudan, Syria, Tunisia, United Arab Emirates, West Bank, Yemen, and Gulf, Middle East, and Arab. An initial list of 2750 abstracts were reviewed, and 11 articles were identified as relevant but only 7 articles could be retrieved and reviewed

after several attempts to locate the original authors. The articles retrieved were often different in their specific objectives and general methodological approaches. They, furthermore, tackled different aspects of suicidality, such as suicide ideation and attempts. Hospital and government based studies are reviewed in another upcoming article.

### *Terminology*

In the following review, non-fatal self-injurious behavior is referred to as attempted suicide or parasuicide.

### **Results**

#### *Egypt*

In another study by Okasha et al<sup>1</sup>, 12-month suicidal feelings and attempts, and their correlates were assessed in randomly selected final year medical students at Ain-Shams Medical School during the academic year 1978-79 (n= 516; age: early to mid twenties). The instrument comprised five main questions that assess the prevalence of 12 month suicidal feelings of different magnitude and the presence of 12 month suicide attempts. In the past year, 12.2% acknowledged some degree of suicidal feelings and 0.4% reported a suicide attempt. Suicidal feelings were reported to be "significantly" associated to being female. Suicidal feelings were significantly related to 25 psychiatric symptoms such as: "feel in poor spirits," "feel on the verge of a breakdown," "feel tired in the morning," "feel no one understands," "feel weak all over,"

"loss of appetite," "inability to get going," "nervousness," "prefer to be alone," "trembling and headache" ( $P = 0.001$ ). Furthermore, subjects with suicidal feelings were significantly more likely to experience 2 or more life-events ( $P < 0.001$ ), report 3 or more illnesses ( $P < 0.001$ ) and use tranquilizers or sleeping pills in the past 12 months in comparison to the control group.

#### *Jordan*

In a study by Daradkeh<sup>2</sup>, the effect of national and religious events on the prevalence of parasuicide was assessed by comparing the number of parasuicides during the holy Muslim month of Ramadan to the month before it and the month following it, in the Jordanian population (95% Muslim). Data concerning the frequency of attempted suicide were obtained from the Police Register records during 1986-1991. The prevalence of parasuicide significantly decreased during the Holy month of Ramadan in comparison to the month prior to it and the month after it ( $P < 0.05$ ), whereas no significant difference in the prevalence of suicide attempts was observed in the month before Ramadan and the month after it.

#### *Lebanon*

Shediak-Rizakallah et al<sup>3</sup>. used a self-administered anonymous questionnaire to assess the 15 lifestyles and risk areas that had been previously determined in focus groups, which included lifetime suicide ide-

ation and attempts. One-thousand-and- sixty- five entering level university students (age range: 16-19) were selected to be studied, 954 students participated (refusal rate: 0.9%). The prevalence of lifetime suicide ideation and attempts in students was 13.9% and 6.3%, respectively. Female students were significantly more likely to report lifetime suicide ideation ( $p \leq .05$ ). There was no significant difference in lifetime suicide attempts between males and females (6.4% and 6.3%, respectively).

In a study by Weissman and colleagues<sup>4</sup>, Lebanon was one out of 9 countries (United States, Canada, Puerto Rico, France, West Germany, Taiwan, Korea and New Zealand) that participated in a cross-national study that compared the rates of lifetime suicide ideation and attempts. The countries involved performed independent surveys using similar diagnostic assessments (DIS-3). Face to face interviews were conducted and a DSM-III criterion was used in order to assess and diagnose mental disorders. In Lebanon, the study was carried by Karam<sup>5</sup>, the sample ( $N=435$ ) was drawn from 4 communities with different exposure to acts of war. Lebanon had the lowest lifetime prevalence of suicide ideation (2.09/ 100) and attempts (0.72/100). Lifetime suicide ideation was significantly more prevalent among females (2.88/100) than

males (1.24/100), while no significant gender difference was observed for attempted suicide. Among depressed individuals, Lebanon showed to have the lowest prevalence of suicide ideation (2.57/100) and attempts (0.92/100).

#### *Morocco*

Agoub et al<sup>6</sup>. assessed the prevalence of past month suicide ideation and lifetime suicide attempts and their correlates in a representative sample of the general population in the urban area of Casablanca. A stratified random general population sample was drawn from the adult population (age range: 15-80 years; mean age 32.2 years). Eight-hundred - and - fifty face - to - face household interviews were conducted by medical doctors or clinical psychiatrists, but only 800 completed (400 males and 400 females). The Mini International Neuropsychiatric Inventory (MINI) was used to assess Axis I diagnosis according to the DSM-III criteria, and the MINI suicidality module was used to rate past month suicidal ideation and lifetime suicide attempts. Out of the total sample, 6.3% (2.25% of males and 10.5% of females) reported past month suicide ideation and 2.1% reported at least one suicide attempt during their lifetime (1.5% of males and 2.75% of females). Suicide ideation was significantly related to non-married status (OR= 5.4, 95% CI, 2.0- 15.7), having a history of mental illness (OR=

5.3, 95% CI, 2.3-11.8), and not having children (OR= 2.5, 95% CI, 1.1-5). The most common disorders among suicide ideators were major depressive disorders (23.5%), agoraphobia (23.5%), dysthymia (21.5%) and OCD (19.6%). Suicide ideates were commonly diagnosed with co morbid disorders (88.2%).

#### *Sudan*

Goldney and colleagues<sup>7</sup> assessed the presence of suicidal ideation in two selected samples of Sudanese females by using the Arabic version of the 28 item General Health Questionnaire, which includes 4 questions that measure suicide ideation during the past few weeks. The first group, was selected from Ahfad University (29 subjects; age range 18-23) and the second group was selected from a displaced persons area, Jebel Aulia, (30 subjects; age range 18-66), both groups were selected on the basis of convenience. The results showed a significant difference between the prevalence of recent (past few weeks) suicide ideation in the displaced group (55%) as compared to the group of university students (27%) ( $p = 0.044$ ).

#### *West Bank & Gaza*

Dabbagh<sup>8</sup> gathered qualitative data from the narratives of Palestinians living under Israeli occupation in the regions of Gaza and the West Bank, using a semi-structured interview, of individuals who had attempted suicide (diagnostic method

not mentioned in article). Interviews took place in a hospital emergency room and later at the attempter's home. Thirty one cases were interviewed (age range: 17-42), the majority of cases were between the ages of 18-30 years old. Seventy-one percent were females and 29% males. Females were mostly married (50%), while males were more frequently single (78%). Prior to the attempt, females described their emotions as "about to explode" and as "being blinded by anger," males on the other hand described their preceding emotions as "feeling worn out," "tired," and "depressed." Females described their attempt as an impulsive reaction, a "burst of high emotion," within a period of escalating stress and anxiety, whereas males were more likely to have made a suicide plan that had been given serious thought and consideration during the context of depression and was related to the political and economic hardship that Palestinians encounter on a daily basis. Females more commonly regretted their attempt than males.

### **Discussion**

The present review examined Arab community based suicide studies that were retrieved from the published literature spanning up to 2006. Only a few of the Arab suicide studies were community based, while the majority was hospital based or used government and po-

lice records. Not all Arab countries are represented in this review (although we did not exclude any from our search) and it is possible we might have missed important studies in spite of our best attempt to locate the authors and retrieve the articles.

Due to the lack of national epidemiological studies in the Arab world and the methodological differences present across Arab suicide studies, it is difficult to compare results and make generalizations about the prevalence and correlates of suicidality.

In the Arab community based suicide studies we reviewed, the prevalence of lifetime suicide ideation varied from 2.09% to 13.9% and the lifetime prevalence of attempts from 0.72% to 6.3%, obviously depending on the studied samples, keeping in mind that none of them was a nationally representative sample. Lifetime suicide ideation was significantly related in these community studies to being female, while lifetime suicide attempts did not significantly differ between genders.

Twelve months suicide ideation, usually considered to be less biased in recall, was significantly related, when assessed, to: female gender, depressive symptoms, reporting more life events, illnesses and using more tranquilizers/sleeping pills.

Past month suicide ideation widely ranged from 6.3% (in a randomly

selected sample from the general population in Casablanca) to 55% (in a group of female refugees in Sudan). Past month suicide ideation was significantly related to being single, having a history of psychiatric disorders, and being childless.

It is very difficult and inappropriate to compare suicidality figures from the Arab world to those in other countries, since as we repeatedly stressed in this review, the published results do not allow such comparisons, in spite of clear efforts by many Arab authors to conduct carefully designed studies. Nevertheless the only international study that used similar methodology across all sites found lower rates of suicide ideation and attempts in Lebanon when compared to western countries in this cross national study<sup>4</sup>. Yet the Lebanon sample was

not nationally representative and was carried out during the Lebanon wars. A larger international collaborative study, involving twenty nine countries so far (and involving Lebanon and Iraq so far from the Arab World for whom our group is a training center), has been carried out recently and international comparisons on several parameters of suicidality will probably lend themselves to better comparisons<sup>9</sup>.

In conclusion, national epidemiological studies are needed to assess the prevalence and correlates of suicidal behaviors in the Arab World. This could lead to the homegrown development of awareness and prevention programs suited locally to offer the best against this serious and lethal behavior.

#### **References:**

1. Okasha A, Lotaif F, Sadek A. Prevalence of suicidal feelings in a sample of non-consulting medical students. *Acta Psychiatr Scand* 1981; 63: 409-15.
2. Daradkeh TK. Parasuicide during Ramadan in Jordan. *Acta Psychiatr Scand* 1992; 86: 253-4.
3. Shediak-Rizkallah MC, Soweid RAA, Farhat TM, Yeretizian J. Adolescent Health-Related Behaviors in Postwar Lebanon: Findings among Students at the American University of Beirut. *I Quart Com Health Edu* 2000-2001; 20(2): 115-31.
4. Weissman MM, Bland RC, Canino GJ, Greenwald S, Hwu HG, Joyce PR, et al. Prevalence of suicide ideation and suicide attempts in nine countries. *Psychol Med* 1999; 29: 9-17.
5. Karam E. Depression et guerres du Liban: methodologie d'une recherche. *Annales de Psychologie et des Sciences de l'Education* 1992; 99-106. USJ Beirut

6. Agoub M, Moussaoui D, Kadri N. Assessment of Suicidality in a Moroccan metropolitan area. *J Affect Disord* 2006; 90: 223-6.
7. Goldney RD, Harris LC, Badri A, Michael S, Fisher L. Suicidal Ideation in Sudanese Women. *Crisis* 1998; 19(4): 154-8.
8. Dabbagh NT. Narrative Expressions of Despair under Occupation. *Anthropology and Medicine* 2004; 11(2): 201-20.
9. WHO World Mental Health Survey Consortium Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. *JAMA* 2004; 291, 2581-90

### المخلص

تراجع هذه المقالة كل ما نشر حول موضوع الإنتحار في المجتمع العربي. وذلك عبر إجراء بحث منهجي بواسطة عدة "وسائل بحث" للمقالات المنشورة حتى عام 2006 (البحرين، مصر، العراق، الأردن، الكويت، لبنان، المغرب، سلطنة عمان، فلسطين، المملكة العربية السعودية، السودان والإمارات). تعددت النتائج وفقاً للبلدان والطرق المتبعة. أظهرت الدراسات التي أجريت على عينات من المجتمع في العالم العربي أن نسبة الأفكار الإنتحارية تتراوح ما بين 2.09% و 13.9% ونسبة محاولة الإنتحار تتراوح ما بين 0.72% و 6.3% وذلك خلال فترة حياة الشخص. لقد تمّ تحديد العديد من العوامل التي تؤدي للإنتحار. تبين في مجمل الدراسات التي أجريت على عينات من المجتمع أن نسبة الأفكار الإنتحارية مرتفعة أكثر لدى الإناث طوال فترة حياتهن أو خلال الأشهر الأثنتي عشر الأخيرة. بالإضافة، إن الأفكار الإنتحارية خلال الأشهر الأثنتي عشر الأخيرة لها علاقة مهمة بعوارض الإكتئاب، تجارب أكثر في الحياة، الأمراض، واستعمال المهدئات / الحبوب المنومة. أما الأفكار الإنتحارية خلال الشهر الأخير، فلها علاقة بأن يكون الشخص أعزب، ليس لديه أولاد، أو كان لديه مرض نفسي، كالإكتئاب، رهاب الخلاء، القهري الوسواسي، أو القلق الشامل. مقارنة بالتلميذات الجامعيات، إن الإناث النازحات واللجئات كان لديهن أفكار الإنتحارية أكثر خلال الأسابيع القليلة الماضية. في الخاتمة، هناك حاجة ماسة للقيام بدراسات ميدانية شاملة تتضمن عينات تمثل المجتمع بأكمله من أجل تقييم نسبة السلوك الإنتحاري والعوامل المؤدية إليه في العالم العربي.

### Acknowledgement

This project was partially funded by the Institute for Development, Research, Advocacy and Applied Care (IDRAAC), the Lebanese Ministry of Public Health and the World Health Organization (WHO, Lebanon). The authors wish to thank Ms. Lynn Farah for editing the manuscript and Ms Dania Younes for helping in the literature review.

**Table 1.** Community based studies on suicide ideation and attempts in the Arab World.

Country /Author/ Year	Objective	Methods	Key results
Egypt Okasha et al. (1981)	Evaluate 12 month suicidal feelings and attempts, and their correlates in the general population.	516 final year medical students chosen at random; age range: early to mid 20s Questionnaire composed of 5 questions that evaluate suicidal feelings of different magnitude and attempted suicide in the past year.	12.2% had some suicidal feeling and 0.4% made a suicide attempt in the past year. Suicidal feelings: F>M (significant) and were significantly related to depressive symptoms (p=0.001) . <ul style="list-style-type: none"> <li>• Subjects with suicidal feelings experienced significantly more life events (p &lt; 0.001), illnesses (p &lt; 0.001), and used more tranquilizers/sleeping pills than the control group.</li> </ul>
Lebanon Shediac-Rizakallah  et al. (2000-2001)	Evaluate lifetime prevalence of suicide ideation and attempt.	954 University Students; age range: 16-19 years; refusal rate: 0.9%  Self-administered anonymous questionnaire including 15 lifestyle and risk areas (includes 12 month suicide ideation and attempt)	13.9 % (n=132) had lifetime suicide ideation and 6.3% (n=60) had lifetime suicide attempts <ul style="list-style-type: none"> <li>• Suicide ideation: F&gt;M (p ≤ 0.05)</li> </ul>
Lebanon  Weissman/Karam et al. (1999).	Evaluate and compare lifetime rates of suicide ideation and attempts across 9 countries.	Lebanon sample was derived from 4 communities with different exposures to acts of war (N= 435); age range: 18-64 years . Diagnostic Interview Schedule (DIS-III) with DSM-III criteria	Lebanon had the lowest lifetime prevalence of suicide ideation (2.09/100) and attempts (0.72/100) <ul style="list-style-type: none"> <li>• Suicide ideation: F&gt;M (significant )</li> <li>• Among depressed individuals, Lebanon had the lowest rate of suicide ideation (1.57%) and attempts (0.29%).</li> </ul>
Morocco  Agoub et al. (2006).	Evaluate the rate of suicide ideation (past	800 participants (400 males and 400 females); age range: 15-80 years; mean age: 32.2	6.3% reported 1 month ideation and 2.1% (at least one attempt) reported lifetime suicide attempt <ul style="list-style-type: none"> <li>• Suicide ideation was signifi-</li> </ul>

	month) and attempt (lifetime) and identity risk factors associated with suicidality.	years Mini International Neuropsychiatric Interview (M.I.N.I. suicidality module) with DSM-III criteria	cantly related with: non-married status (OR=54,95% CI, 2.0-15.7); a history of psychiatric disorders (OR= 5.3, 95% CI, 2.3-11.8); and not having children (OR= 2.5, 95% CI,1.1-5) <ul style="list-style-type: none"> <li>• Most common disorders among ideates: MDD (23.5%); agoraphobia (23.5%); dysthymia (21.5%); OCD (19.6%); and GAD (19.6%)</li> <li>• 88.2% of those with ideation had comorbid disorder</li> </ul>
Sudan Goldney et al. (1998).	Evaluate suicidal ideation (within the past few weeks) in two selected samples of Sudanese women	29 female university students (age range:18-23) and 30 females from a displaced-persons area (age range: 8-66 years). Selection based on availability. 28 item General Health Questionnaire with 4 questions that assess recent (with in the past few weeks) suicide ideation	55% of displaced vs. 27% of university students experienced suicide ideation within the "past few weeks" ( p = 0.044)

Note: Studies by Daradkeh (1992) and by Dabbagh (2004) were not included in the table because they did not share common outcomes listed under table.

**\*Correspondence:** Elie G. Karam, MD

Institute for Development Research Advocacy and Applied Care (IDRAAC)  
 POBox: 166227, Ashrafieh, Beirut, Lebanon 1100 2110Tel/Fax: 961 1583583  
 Email: [idraac@idraac.org](mailto:idraac@idraac.org)