

# The Trend of Indexed Papers in PubMed Covering Different Aspects of Self-Immolation

Mohsen Rezaeian<sup>1\*</sup>

<sup>1</sup> Department of Social Medicine, Occupational Environmental Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

Received: 4 Nov. 2012; Accepted: 2 Apr. 2013

**Abstract-** Self-immolation is a fatal and devastating method of committing suicide used around the world. The chief aim of the present article is to look at the trend of indexed papers in PubMed covering different aspects of self-immolation. PubMed search engine (<http://www.ncbi.nlm.nih.gov>) was searched by using six keywords i.e. “self-immolation”, “self-inflicted burn”, “self-burning”, “self-incineration”, “suicidal burns” and “suicide by burning”. These keywords should appear either in the title or the abstract of the articles. The time frame was set as to retrieve papers expanding from early indexing time up to end of the year 2011. Based on the search strategy 132 papers were retrieved from these total numbers; 12 (9%) were categorized as review papers; 24 (18%) as case reports and the rest 96 (73%) were original studies. It seems that the number of papers increased during the years of investigations and the highest indexed papers i.e. 14 (10.6%) belonged to the year 2011. While most journals, published only one article the highest indexed papers i.e. 35 (26.5%) belonged to Burns. There was an increasing trend in the number of self-immolation articles indexed in PubMed since 1965. Three journals i.e. Burns, Journal of Burn Care and Rehabilitation and Journal of Forensic Sciences hosted for more than 37% of all those indexed articles. However, given the increasing trend of self-immolation still more studies are needed to shed light on the diverse aspects of this appalling human behavior.

© 2013 Tehran University of Medical Sciences. All rights reserved.

*Acta Medica Iranica*, 2014;52(2):158-162.

**Keywords:** Self-immolation; Self-inflicted burn; Self-burning; Self-incineration; Suicidal burns; Suicide by burning; PubMed

## Introduction

Self-immolation or suicide by burning is a fatal and devastating method of committing suicide used around the world. Evidence indicated that although the bulk of this phenomenon occurs in developing countries including Middle Eastern countries and Indian sub-continent the anecdotal episodes of self-immolation might happen in every corner of the globe (1 & 2).

Evidence further suggests that there seems to be a growing trend of suicide among young married deprived females in developing countries who apply self-burning (3 & 4). Therefore, for better understanding the patterns and the causal roots of self-inflicted burns more scientific investigations are needed. The chief aim of the present article is to look at the trend of the indexed papers in PubMed covering different aspects of self-immolation.

## Materials and Methods

PubMed search engine (<http://www.ncbi.nlm.nih.gov>) was searched by using six keywords i.e. “self-immolation”, “self-inflicted burn”, “self-burning”, “self-incineration”, “suicidal burns”, and “suicide by burning”.

These keywords should appear either in the title or the abstract of the articles. The time frame also was set as to retrieve papers expanding from early indexing time up to end of the year 2011. Advanced search options were applied to distinguish between types of articles i.e. reviews, case reports and original studies.

## Result

Based on the search strategy 132 papers were retrieved dealing with self-immolation. From these total numbers, 12 (9%) were categorized as review papers, 24 (18%) as case

**Corresponding Author:** M. Rezaeian

Department of Social Medicine, Occupational Environmental Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran  
Tel: +98 391 5234003, Fax: +98 391 5225209, E-mail address: [m\\_rezaeian@rums.ac.ir](mailto:m_rezaeian@rums.ac.ir)



Figure two also depicted the number of papers in an ascending order based on journal names in which they appeared. As this figure highlights, while most journals published only one article the highest indexed papers i.e. 35 (26.5%) belonged to Burns. The second highest papers i.e. 9 (6.8%) belonged to Journal of Burn Care and Rehabilitation while the third highest papers i.e. 7 (5.3%) belonged to Journal of Forensic Sciences.

## Discussion

The results highlighted that from 1965 to 2011 there are 132 indexed papers that cover different aspects of self-immolation. Nine percent of all retrieved articles were categorized as review papers. These papers cover the patterns of self-immolation around the world (5) or focus on the self-immolation in an especial faith (4 & 6). These papers also cover socioeconomic, cultural, behavioral, psychiatric, and psychopathology aspects of self-immolation (7-10). "Managing self-inflicted burn injuries" (11) is also among other topics which are covered with the review papers.

Furthermore, eighteen percent of all articles were categorized as case reports. The earliest case report entitled: "Treatment and management of a case of self-burning" date backs in 1976 (12). "Camphor burns to the palm: an unusual self-inflicted burn" (13) and "An unusual self-inflicted burn in an asthmatic patient" (14) are to name just a few titles of the other case reports.

Seventy three percent of all articles were categorized as original studies. Most of these studies are related to the pattern of self-immolation in the most affected countries within developing world including Iran (15-24), India (25-33), Sri Lanka (34-36), Afghanistan (37 & 38) and Iraq (39). Less of these studies are also related to the pattern of self-immolation in the least affected countries within developed world including Finland (40), Greece (41), United States of America (42-43) and Ireland (44).

The results further highlighted that from 1965 to 2011 there is also an upward trend in the number of articles covering different aspects of self-immolation and the highest proportion of indexed papers i.e. 10.6% belonged to the year 2011. However, given the increasing trend of self-inflicted burns especially among young married deprived females, in developing countries (3 & 4), more studies are needed to shed light on other different aspects of this appalling human behavior. For instance, although evidence suggests that the case fatality rate of self-immolation could be high

(1) we need further studies to comprehend what would be the faith of those who survive, but should live with the horrendous consequences of their act.

There are fifty-nine journals that publish relevant articles from 1965 to 2011. However, most of them published only one article. One journal i.e. Burns hosted for more than 25% of all those indexed articles. Furthermore, Journal of Burn Care and Rehabilitation and Journal of Forensic Sciences are jointly hosted for nearly 12% of other indexed articles. These figures highlighted that these three journals provide an appropriate forum for discussion around different aspects of self-immolations.

Finally nearly ninety four percent of all retrieved papers were written in English. This might reflect that either PubMed is keen to index mostly English journals and/or scientists all over the world tend to publish their scientific works mostly in English (45 & 46).

There was an increasing trend in the number of self-immolation articles indexed in PubMed since 1965. However, given the increasing trend of self-immolation still more studies are needed to shed light on the diverse aspects of this appalling human behavior. Three journals i.e. Burns, Journal of Burn Care and Rehabilitation and Journal of Forensic Sciences hosted for more than 37% of all those indexed articles and provided an appropriate forum for discussion around different aspects of self-immolations.

The indexed papers cover different aspects of self-immolation and in ascending order were categorized as reviews, case reports and original studies. Original studies reflected the geographical locations of self-burn around the world with more papers originating from mostly affected areas.

Since different search engines have different coverage, it would be suggested that future studies will carry out to investigate the same issue in other search engines including Web of Science, Scopus, Google Scholar, etc. Moreover, future studies might also consider the quality of journals that publish papers on self-immolation, for example, by looking at their impact factors.

## References

1. Rezaeian M. Epidemiology of self-immolation. Burns 2013;39(1):184-6.
2. Peck MD. Epidemiology of burns throughout the World. Part II: Intentional burns in adults. Burns 2012;38(5):630-7.

3. Rezaeian M. Suicide among young Middle Eastern Muslim females. *Crisis* 2010;31(1):36-42.
4. Campbell EA, Guiao IZ. Muslim culture and female self-immolation: implications for global women's health research and practice. *Health Care Women Int* 2004;25(9):782-93.
5. Laloë V. Patterns of deliberate self-burning in various parts of the world. A review. *Burns* 2004;30(3):207-15.
6. Kelly BD. Self-immolation, suicide and self-harm in Buddhist and Western traditions. *Transcult Psychiatry* 2011;48(3):299-317.
7. Poeschla B, Combs H, Livingstone S, et al. Self-immolation: socioeconomic, cultural and psychiatric patterns. *Burns* 2011;37(6):1049-57.
8. McKibben JB, Ekselius L, Girasek DC, et al. Epidemiology of burn injuries II: psychiatric and behavioural perspectives. *Int Rev Psychiatry* 2009;21(6):512-21.
9. Romm S, Combs H, Klein MB. Self-immolation: cause and culture. *J Burn Care Res* 2008;29(6):988-93.
10. Geller JL. Self-incineration. A review of the psychopathology of setting oneself afire. *Int J Law Psychiatry* 1997;20(3):355-72.
11. Baker T, Tonkin C, Wood F. Managing self-inflicted burn injuries. *Aust Nurs J* 2007;14(8):28-30.
12. Cox MD, Klinge V. Treatment and management of a case of self-burning. *Behav Res Ther* 1976;14(5):382-5.
13. Lewis DM, Balakrishnan S, Coady MS, et al. Camphor burns to the palm: an unusual self-inflicted burn. *Burns* 2007;33(5):672.
14. Akhtar S, Majumder S. An unusual self inflicted burn in an asthmatic patient. *Burns* 2003;29(2):191-2.
15. Alaghebandan R, Lari AR, Joghataei MT, et al. A prospective population-based study of suicidal behavior by burns in the province of Ilam, Iran. *Burns* 2011;37(1):164-9.
16. Rezaie L, Khazaie H, Soleimani A, et al. Self-immolation a predictable method of suicide: a comparison study of warning signs for suicide by self-immolation and by self-poisoning. *Burns* 2011;37(8):1419-26.
17. Taghaddosinejad F, Sheikhezadi A, Behnoush B, Reshadati J, Sabery SH. A survey of suicide by burning in Tehran, Iran. *Acta Med Iran*. 2010;48(4):266-72.
18. Saddichha S, Prasad MN, Saxena MK. Attempted suicides in India: a comprehensive look. *Arch Suicide Res* 2010;14(1):56-65.
19. Mohammadi AA, Danesh N, Sabet B, et al. Self-inflicted burn injuries in southwest Iran. *J Burn Care Res* 2008;29(5):778-83.
20. Ahmadi A, Mohammadi R, Stavrinou D, et al. Self-immolation in Iran. *J Burn Care Res* 2008;29(3):451-60.
21. Ahmadi A, Ytterstad B. Prevention of self-immolation by community-based intervention. *Burns* 2007;33(8):1032-40.
22. Maghsoudi H, Garadagi A, Jafary GA, et al. Women victims of self-inflicted burns in Tabriz, Iran. *Burns* 2004;30(3):217-20.
23. Saadat M, Bahaoddini A, Mohabatkar H, et al. High incidence of suicide by burning in Masjid-i-Sulaiman (southwest of Iran), a polluted area with natural sour gas leakage. *Burns* 2004;30(8):829-32.
24. Rastegar Lari A, Alaghebandan R. Epidemiological study of self-inflicted burns in Tehran, Iran. *J Burn Care Rehabil* 2003;24(1):15-20.
25. Zarghami M, Khalilian A. Deliberate self-burning in Mazandaran, Iran. *Burns*. 2002;28(2):115-9.
26. Vijayakumar L. Indian research on suicide. *Indian J Psychiatry* 2010;52(Suppl 1):S291-6.
27. Ganesamoni S, Kate V, Sadasivan J. Epidemiology of hospitalized burn patients in a tertiary care hospital in South India. *Burns* 2010;36(3):422-9.
28. Kanchan T, Menon A, Menezes RG. Methods of choice in completed suicides: gender differences and review of literature. *J Forensic Sci* 2009;54(4):938-42.
29. Sanghavi P, Bhalla K, Das V. Fire-related deaths in India in 2001: a retrospective analysis of data. *Lancet* 2009;373(9671):1282-8.
30. Gajalakshmi V, Peto R. Suicide rates in rural Tamil Nadu, South India: verbal autopsy of 39000 deaths in 1997-98. *Int J Epidemiol* 2007;36(1):203-7.
31. Kumar V. Burnt wives--a study of suicides. *Burns* 2003;29(1):31-5.
32. Singh SP, Santosh PJ, Avasthi A, et al. A psychosocial study of 'self-immolation' in India. *Acta Psychiatr Scand* 1998;97(1):71-5.
33. Mahla VP, Bhargava SC, Dogra R, et al. The psychology of self-immolation in India. *Indian J Psychiatry* 1992;34(2):108-13.
34. Fernando RF, Hewagama M, Priyangika WD, et al. A study on suicide by self immolation. *Ceylon Med J* 2011;56(4):182-3.
35. Fernando R, Hewagama M, Priyangika WD, et al. Study of suicides reported to the Coroner in Colombo, Sri Lanka. *Med Sci Law* 2010;50(1):25-8.
36. Laloë V, Ganesan M. Self-immolation a common suicidal behaviour in eastern Sri Lanka. *Burns* 2002;28(5):475-80.
37. Padovese V, De Martino R, Eshan MA, et al. Epidemiology and outcome of burns in Esteqlal Hospital of Kabul, Afghanistan. *Burns* 2010;36(7):1101-6.
38. Raj A, Gomez C, Silverman JG. Driven to a fiery death--the tragedy of self-immolation in Afghanistan. *N Engl J Med* 2008;358(21):2201-3.
39. Othman N. Suicide by self-burning in Iraqi Kurdistan: description and risk factors. *Arch Suicide Res*

### The Trend of Indexed Papers in ...

- 2011;15(3):238-49.
40. Palmu R, Isometsä E, Suominen K, et al. Self-inflicted burns:an eight year retrospective study in Finland. *Burns* 2004;30(5):443-7.
41. Tsati E, Iconomou T, Tzivaridou D, et al. Self-inflicted burns in Athens, Greece:a six-year retrospective study. *J Burn Care Rehabil* 2005;26(1):75-8.
42. Cimino PJ, Williams TL, Fusaro A, et al. Case series of completed suicides by burning over a 13-year period. *J Forensic Sci* 2011;56(Suppl 1):S109-11.
43. Erzurum VZ, Varcellotti J. Self-inflicted burn injuries. *J Burn Care Rehabil* 1999;20(1 Pt 1):22-4.
44. O'Donoghue JM, Panchal JL, O'Sullivan ST, et al. A study of suicide and attempted suicide by self-immolation in an Irish psychiatric population:an increasing problem. *Burns* 1998;24(2):144-6.
45. Loria A, Arroyo P. Language and country preponderance trends in Medline and its causes. *J Med Libr Assoc* 2005;93(3):381-5.
46. Haiqi Z, Yamazaki S, Urata K. The tendency toward English-language papers in MEDLINE. *Bull Med Libr Assoc* 1997;85(4):432-4.