

between 1988 and 1990.)

In order to have an increase in research output, significant resources must be committed. Laboratories must be built or equipped, and researchers must be employed or re-assigned. Once new laboratories are set-up, research must be initiated and completed, and then published. This results in a significant lag between a change in research priorities and that change becoming evident in publications in the open literature. Therefore, the increased publications first observed around 1974, may reflect a change in research priorities decided upon around 1970.

The sudden decreases seen in publications may also reflect changes in research priorities, shortages due to the war effort, or other factors.

4.3 Gaps in the Publications

In some cases, when examining the open scientific literature, what is not found may also be of interest. The following section will examine several topics that appeared to be under-represented or totally lacking in the Iranian scientific literature.

Two potential warfare agents that are often mentioned in relation to concerns about biological and toxin warfare are *Bacillus anthracis* and the botulinum neurotoxin A. These two agents, respectively, cause anthrax and botulism. Anthrax causes fever, shock and, if inhaled, has a mortality rate of between 80 to 100 percent. Botulism, often fatal, causes vomiting, convulsions, and paralysis and can be serious problem in developing countries. While anthrax appears to be major health problem, there have been only 10 publications