

## Assessment of multiple sclerosis awareness and knowledge among the Saudi population in Riyadh City

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**Introduction:** Multiple sclerosis (MS) is the most common autoimmune disease affecting the central nervous system (CNS) (1). It affects adults during their most productive years. The estimated prevalence of MS around the world is 30 per 100,000 (2). Prevalence of MS in Saudi Arabia has not been determined; however, researchers suggest an increase in incidence and prevalence in the Middle East (3 and 4). Clinically isolated syndrome (CIS) is the first neurologic symptom that results from a demyelinating process in the CNS. Recent trials using beta-interferon in patients with a CIS have demonstrated that early treatment may delay developing MS in about 50% (5). Early treatment has also been shown to slow the progression and reduce disability at 3 years by 40% (6,7). A lack of knowledge about the disease symptoms may cause patients to present late and miss the opportunity to reap the benefits of early intervention. This study examines the awareness, knowledge and the sources of knowledge on Multiple Sclerosis disease in Saudi population of Riyadh city. This information would help building more targeted public health awareness campaigns that may aid in early intervention of MS.

**Aim:** To evaluate the awareness, knowledge and sources of the information on MS among the Saudi population in Riyadh City.

**Methodology:** A community based cross sectional study that was conducted in different public areas (shopping malls, coffee-shops, social clubs, supermarkets, and mosques) of different regions of Riyadh, the capital city of Saudi Arabia. Adult Saudis age 18 years and above were included and all health professionals/students and subjects diagnosed with MS were excluded. A structured questionnaire including questions on awareness, knowledge and sources of knowledge on MS was administered by an interview using convenience stratified quota sampling using the size of age strata of Saudi population published from the 2010 census during June 2014. Based on prior research studies, expected knowledge is 20%. Assuming a significant level of 5% and precision of 0.15 a sample size of 246 was sought.

**Results:** Two hundred and forty six subjects were interviewed in 22 settings. The mean age (SD) was 38.4 (13.9) with equal numbers of males/females (M/F). The education levels of subjects were 14 (5.69%), 95 (38.62%) and 137 (55.69%) for subjects with no education, some education (primary, intermediate and high school) and collage or higher education respectively. Less than a third of respondents (30.3%) reported being aware of MS. Knowledge was assessed using 15 questions and a 'knowledge score' was calculated from 100%. Mean knowledge score was low (M -24%, F - 32%) with no significant difference in knowledge between M/F, age groups or educational levels. Subjects who knew someone diagnosed with MS had significantly higher scores of 37.0% ( $p=0.001$ ). The most frequent source of knowledge of subjects was 'learning from people around them' with a significantly higher mean knowledge score of 34.7% ( $p=0.009$ ).

**Conclusion:** Multiple sclerosis awareness and knowledge is suboptimal in Saudi population. The only source of information, which showed significantly higher knowledge scores, was 'learning from people around them' and those who reported knowing a person diagnosed with MS. Our samples reliance on knowledge from people around them may indicate a lack of available information via the Internet or television on MS. We recommend the use of public awareness campaigns through various media to ensure reliable information reach the public in order for early detection and management of this serious disease.