

Nanotechnology in the public eye: the case of Iran, as a developing country

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Received: 16 October 2010 / Accepted: 30 January 2011 / Published online: 18 February 2011
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Abstract Using survey data, public awareness of and attitudes toward nanotechnology are examined in Iran ($N = 759$). Iran is a developing country with a national nanotechnology action plan for a ten year period starting from 2003 and has been active in the field of research and development of nanotechnology meanwhile. First, the results show that majority of people are still not familiar with nanotechnology and perceived risks posed by this technology are not considered to be a lot and most people feel its benefits outweigh the risks. The emotions toward this technology are of a hopeful and positive nature and this technology is looked upon favorably in Iran. In particular, our results reveals that although the level of trust is high specially in scientists to communicate the risks with the public, there are a great number who just have some trust not quite a lot of it. Knowing that it is a hard and time-consuming effort to manage a

nation's view on nanotechnology, extensive research as well as collaboration with other countries is needed to effectively communicate the risks in time.

Keywords Nanotechnology · Risk perception · Iranian public risk perception · Risk communication

Introduction

Nanotechnology, the deliberate manipulation of matter at size scales of less than 100 nm, is widely recognized as one of the key technologies of the 21st century (Paschen et al. 2004; EU Commission 2004; Roco et al., 1999; Siegel et al. 1999; Besley et al. 2008; Bowman and Hodge 2006; Chau et al. 2007; Renn and Roco 2006). Besides it holds the promise of creating new materials and devices which take advantage of unique phenomena realized at those length scales (Paschen et al. 2004; EU Commission 2004; Roco et al. 1999; Siegel et al. 1999; Waldron et al. 2006). As for development of any kind of technology faces different types of risks such as societal, economic, and environmental impacts, nanotechnology has the power to introduce new concerns. Available research suggests that there is not a full understanding of potential for health or environmental risks from engineered nanoparticles (Morgan 2005). Learning from the experience of biotechnology where public opposition to some of its applications (genetically modified foods

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