



# NATION-WIDE PHYSICAL ACTIVITY PROGRAM

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## OVERVIEW

Strong evidence confirms the health benefits of an active lifestyle<sup>1,2</sup>. However, studies showed that 31% of the world's population are not meeting the minimum requirements for physical activity (PA)<sup>3</sup>. Physical inactivity has been identified as the fourth leading risk factor for global mortality causing 6% of deaths globally<sup>4</sup>. Sedentary behaviour and prolonged sitting time are a major risk factor to non-communicable diseases (NCDs) (i.e. cardiovascular diseases, hypertension, and diabetes)<sup>5,6</sup>. In the State of Qatar, more than 50% of the population do not engage in regular PA<sup>7</sup>. High prevalence of physical inactivity in the country, along with other factors, has contributed to a rise in obesity and was found to be the highest among countries of Gulf Cooperation Council<sup>5,7</sup>. Alarming, 75% of Qataris are classified as overweight, out of which 40% are considered obese or morbidly obese<sup>7</sup>. Such an increase in overweight and obesity prevalence is mainly caused by lifestyle changes marked by the increasing trend of sedentary behaviour and unhealthy diet. Consequently, health problems escalated and NCDs have become one of the leading causes of mortality among the population of Qatar.

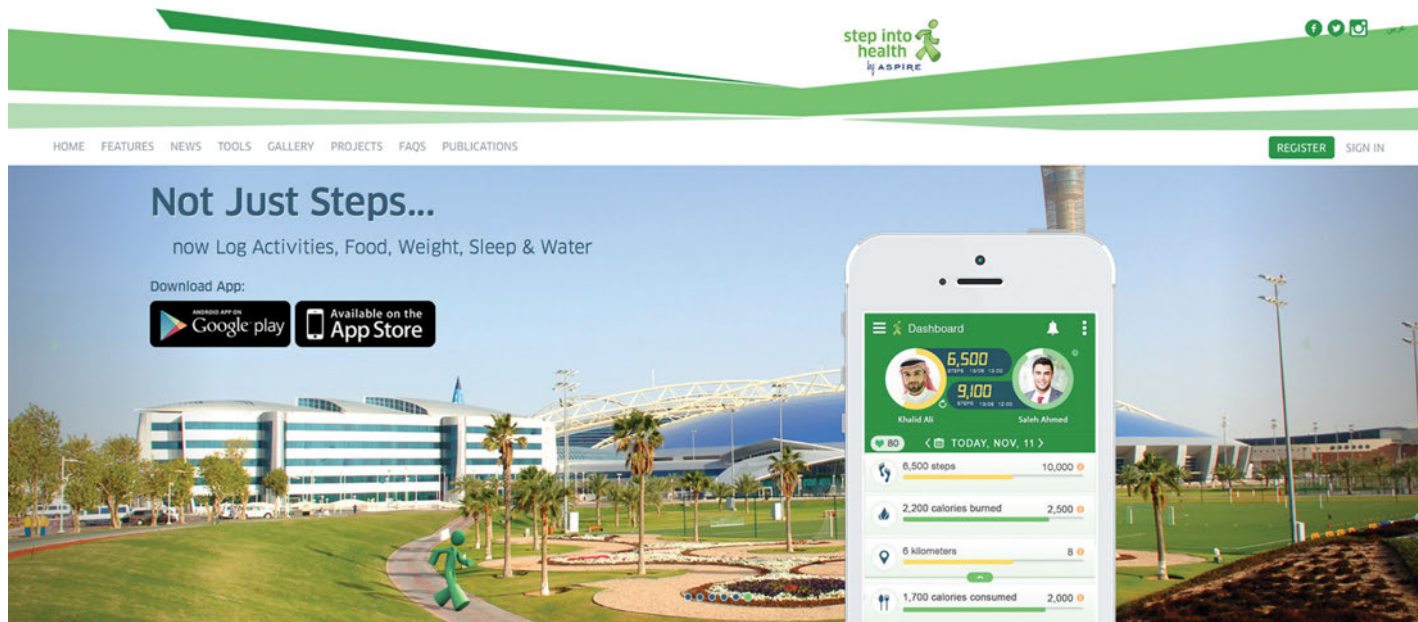
Although PA programs are widely implemented within the community Qatar, still, possible barriers cannot be excluded. Understanding influencing factors, especially environmental, and their associations is essential to effectively reduce physical inactivity and sedentary behaviours. Qatar has a desert climate characterized by relatively warm winters and hot summers when daily average temperature can reach 25°C–46°C (77°F–114°F) accompanied by relatively high humidity<sup>7</sup>. Based on the socio-ecological model (Figure 1), barriers and motivators to PA are present at multiple levels of the system through individual, organisational, social/



**Figure 1:** Socio-ecological Model.

cultural, policy, and environmental. Qatar National Health Strategy (NHS) was developed in 2011, and updated in 2018, to promote PA and healthy food habits among the community. EIM department at Aspetar Hospital developed healthy lifestyle initiatives that fall under the strategy of AZF. Various community-based programs were established including organized seasonal PA campaigns, group interventions, community education and research to promote PA and sport culture.

Step into Health (SIH) is a nation-wide community-based program initiated by Aspire Zone Foundation (AZF), and managed by the Exercise is Medicine (EIM) Department at Aspetar Orthopaedic and Sports Medicine Hospital. SIH program was launched in 2012, as an approach to promote active healthy living among the population in Qatar. It promotes a holistic health behavioural change concept to engage the community in daily recommended amount of PA.



**Figure 2:** SIH online program ([www.stepintohealth.qa](http://www.stepintohealth.qa)).

#### ADOPTED METHODS

Recent scientific evidence showed that walking is a common, easy, accessible, and low cost form of PA that helps in promoting health and well-being among people of different age groups in the community. The recommended level of PA for adults (aged between 18–64 years) is to accumulate at least 30 minutes of moderately intense PA for five days a week<sup>8,9</sup>. Studies identify a duration of 30 minutes of moderate-intensity walking as equivalent to 3,000–4,000 steps/day. Aerobic activity, could be achieved in periods of 10 minutes duration at least<sup>8</sup>. PA levels are categorized based on average daily steps achieved by an individual (sedentary: <5,000 steps/day, active: 5,000–9,999 steps/day, and highly active: ≥10,000 steps/day)<sup>10</sup>.

SIH provides self-monitoring tools linked to an online program (Figure 2) to help registered adults track their PA performance through steps. Evidence shows that fitness monitoring device-based interventions are often linked to Social Cognitive Theory (SCT) to provide reminder and immediate feedback supporting individuals' goal-achievement, which would consequently facilitate behavioural maintenance to self-efficacy.

SIH now involves various sectors of the community such as workplaces, universities, and malls with a total of 46,857 registered members. It is implemented through encouraging individuals to walk 10,000 steps and more throughout the day in a recreational and social approach. Such target of achieving 10,000 steps/day is recognized as an indicator for good health. It is worth mentioning that supportive programs for SIH are also available under an educational platform, Namat for a Healthy Life, which spreads awareness about healthy lifestyle via social marketing ([www.namat.qa](http://www.namat.qa)).

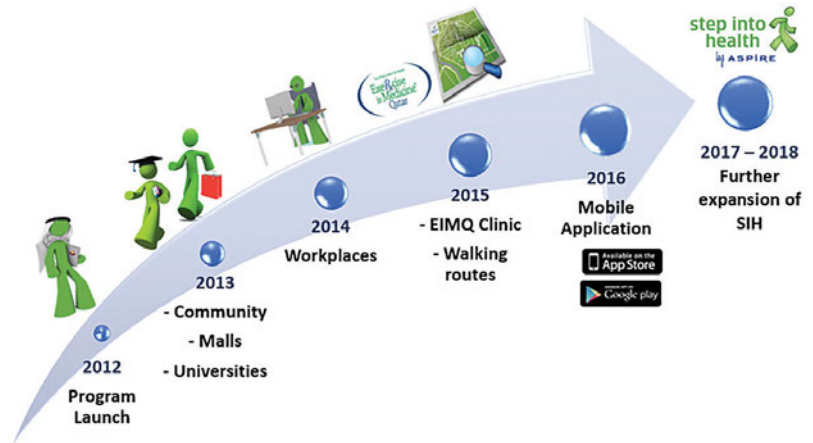
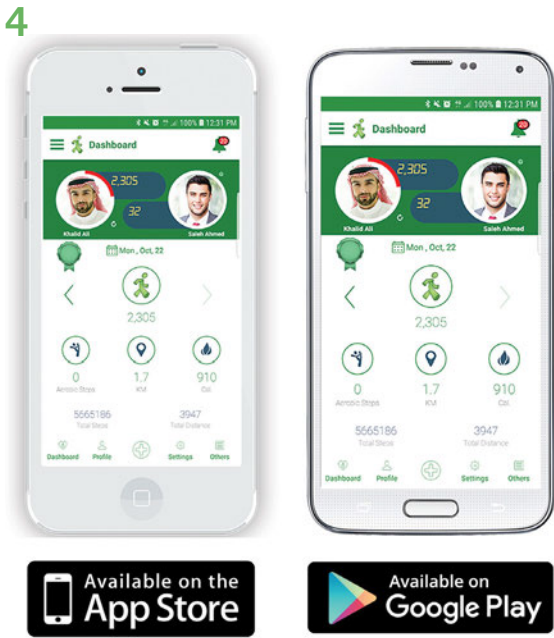


**Figure 3:** Omron HJ-324U pedometer.

#### *Pedometer devices*

Fitness devices are commonly used in PA programs as motivational self-monitoring tools supporting a walking behaviour. Pedometer-based community program with the combination of goal-setting, self-monitoring, and recording were found to be more effective in increasing daily steps. SIH program mainly involved the distribution of pedometers, Omron HJ- 324U (Omron Healthcare Co., Ltd., Japan), to registered members for tracking their step counts (Figure 3). These pedometers have a unique feature for uploading

Strategic Work Plan



Communities	Tools	Campaigns	Environment	Education
<ul style="list-style-type: none"> <li>• Workplaces</li> <li>• Universities</li> <li>• Malls</li> <li>• Exercise is Medicine patients</li> </ul>	<ul style="list-style-type: none"> <li>• Pedometer</li> <li>• Application</li> <li>• Nutritional support</li> <li>• Social interaction</li> <li>• Integration with Fitbit</li> </ul>	<ul style="list-style-type: none"> <li>• Ramadan walking events</li> <li>• Winter walking campaign</li> </ul>	<ul style="list-style-type: none"> <li>• Walking routes:                             <ul style="list-style-type: none"> <li>• Malls</li> <li>• Aspire Park</li> <li>• Barzan Park</li> <li>• Al Khor Community Centre</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Namat Magazine and website</li> <li>• SIH website</li> <li>• Social media channels</li> <li>• Exercise is Medicine educational brochures</li> </ul>

Figure 4: SIH mobile application.

recorded information electronically through a USB connection and are supported by a self-monitoring online account that is linked to a web database managed by AZF. Registered members are encouraged to frequently upload their pedometer readings to their account on the program website by providing them with instructions about the device utilization and data upload. Automated messages are sent to members as reminders to upload their data at intervals of 14 days, 21 days, and 28 days from the last date uploaded within the first 6 months. Members are recommended to wear the pedometer at their waist the whole day and take it off during sleep time and water-based activities. To accommodate members' preferences, mobile application (SIH mobile application Figure 4) is also available through Android and iOS operating systems and can be downloaded from either (Apple Store/ Play Store). The application reads steps counted by the phones' built-in sensors and through direct interfacing to the API exposed by the operating systems. SIH Mobile app also integrates with FitBit cloud services.

LESSONS LEARNT

Despite the known health benefits of PA, information on how the community in Qatar perceive PA and factors that encourage or discourage individuals from being physically active is limited. PA promotion strategies are needed for a better understanding of the barriers and facilitators. Therefore, environmental, cultural, social and religious factors should be tackled when developing such strategies. On the other hand, although numerous studies

Achievements

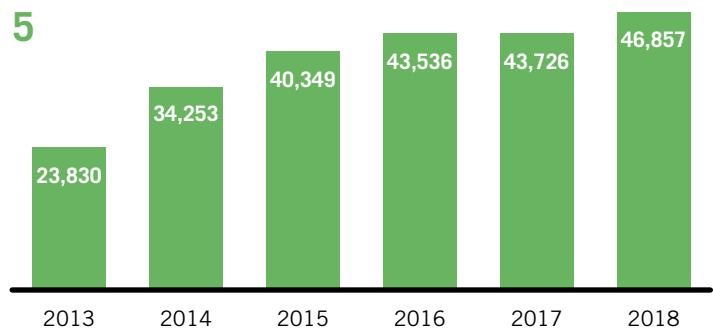
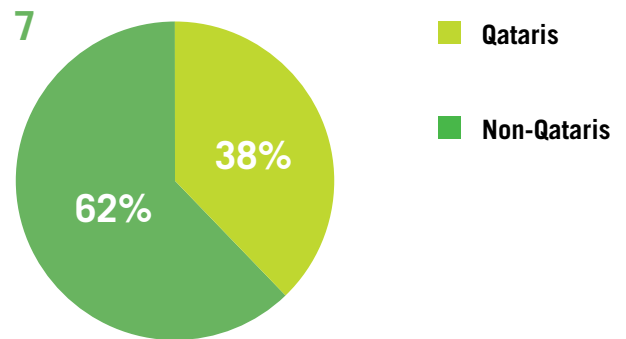
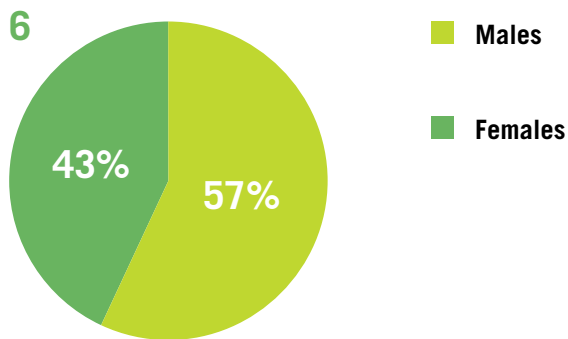


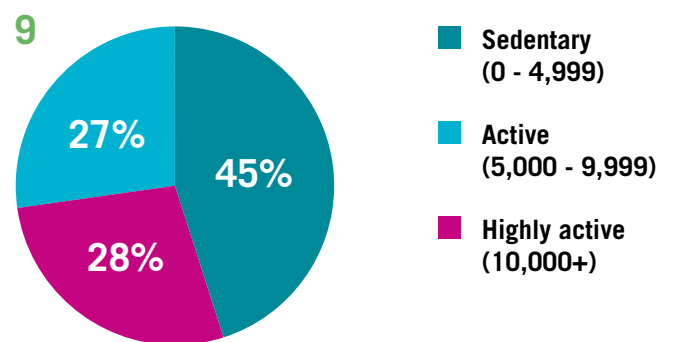
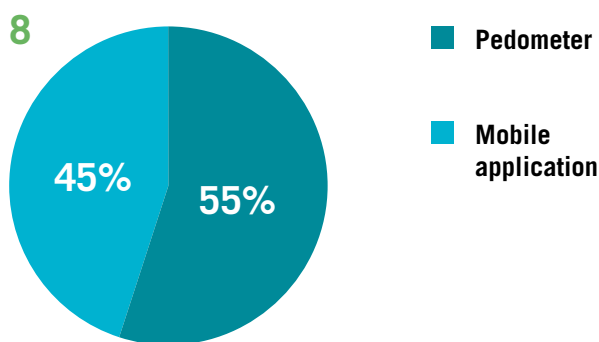
Figure 5: Total number of members registered in SIH between years 2013 and 2018. An increased number of SIH registered members is observed since the launch of the program in 2012.

have assessed the effectiveness of community-based interventions in increasing PA levels and changing behaviour, this has not been explored yet in Qatar. Motivating the Qatari community to follow the NPAG-Q is challenging due to many factors, however, can be achieved through implementing different health promotion interventions. Promoting a healthy lifestyle through community interventions is crucial for reducing the burden of non-communicable diseases among the population of Qatar.



**Figure 6:** Distribution of SIH program registered members by gender. More males are registered in SIH; 57% males compared to 43% females.

**Figure 7:** Distribution of SIH registered members by nationality. There are more non-Qataris registered in the SIH program (62%). Results match the demographic distribution of the population in Qatar.



**Figure 8:** Distribution of SIH registered members by device type users. Pedometer users are 55% of registered members compared to 45% mobile application users. SIH mobile application is becoming more popular in Qatar.

**Figure 9:** Percentage of daily average steps based on physical activity level classification of members uploading steps during 2018. Majority of members are sedentary (45%), achieving an average of less than 5,000 steps/ day. Others are distributed as active (28%), achieving an average between 5,000-9,999 steps/ day and highly active (27%), achieving an average of 10,000 steps/ day or more.

#### TESTIMONIALS

*"I can feel much more energetic now after keeping regular walks using the given pedometer. I reduce my weight too..."*

– Luis Pangan

*"When I showed this device to my doctor, he explained me regular walking can act as half treatment. I use it regularly for my health"*

– Abdul Matin

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References available at  
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