A comparative analysis of physical activity levels in a designated recreational park versus a designated open space in the Tucson Mountain Ridge:

A closer look at Sentinel Peak and Tumamoc Hill users

Healthy People 2020, a collection of health status benchmarks that have been set for the United States to achieve by the year 2020, aims to increase the proportion of American adults who are involved in aerobic physical activity and muscle-strengthening activity (Healthy People 2020, 2013). In the state of Arizona, 24% of adults met the aerobic or muscle strengthening recommendations in 2011; while 47% of Arizonans are either inactive or insufficiently active, and 62% of adults are either overweight or obese (Arizona Department of Health Services Bureau of Nutrition and Physical Activity [AZDHS BNPA], 2013). As may be expected, those who do get the recommended amounts of aerobic and strength physical activity are less likely to be obese (AZDHS BNPA, 2013). Utilizing public parks and open spaces is one form of physical activity that should be widely accessible and may help curb Arizona’s high rate of adult overweight and obesity. While it has been reported that 38% of Arizonans have access to parks (AZDHS, 2013), less is known about the actual usage of these parks.

Sentinel Peak, also known as "A" Mountain, is a prominent ridge located in the Tucson Mountains on the west side of Tucson and is part of the City of Tucson Parks and Recreation Department. The peak rises 2,897 feet (883 meters) into the air just west of the Santa Cruz River. Adjacent to Sentinel Peak lies its sister peak Tumamoc Hill, at a height of 3,108 feet (947 meters). Tumamoc Hill, unlike its sister peak, is not a designated recreational park; it is owned by The University of Arizona and is managed as an open space. Tumamoc holds the official status of a National Environmental Study Site Area to protect and preserve natural and cultural resources; and is also on the National Register of Historic Places. In accordance with its designation, Tumamoc Hill has historically been used more for research than Sentinel Peak; research studies conducted at and on Tumamoc have covered topics such as botany, geology, ecology and palynology. Tumamoc is also regularly used by Tucsonans as a walking and running destination for physical activity; but no epidemiological studies were identified that have been conducted at this location.

Scientific literature prevails on topics such as public parks and physical activity, built environments and obesity, and recreational spaces and walkability; but we have yet to identify and document the benefits of non-designated recreational/park spaces and the assets that these spaces contribute to a community’s wellbeing. This pilot study opens that door and will inform future research in the domain of asset mapping. The specific aims are as follows:

1. Model development: The equal use of public/open space for physical activity, by a representative sample of the population (users), can be used as a measure and metric for a community health and wellness index.
2. Asset mapping: The users of such public/open spaces can inform us (public health practitioners and other interested stakeholders) of similar assets in the community.
3. Inform policy: Information gained from users on existing community assets used for physical activity can inform stakeholders on best use practices.

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