

Business analysis

Market & Target Audience

The product's target audience is people who have problems with the musculoskeletal system or those who want to maintain their posture in good condition. According to Elsevier, which specializes in various medical studies, the number of people suffering from back pain increased by 54% between 1990 and 2016 and continues to grow. Such rapid growth is one of the key factors influencing market demand. A study¹ conducted by scientists from different countries provides the following statistics on the number of complaints of the population about back pain in different countries:

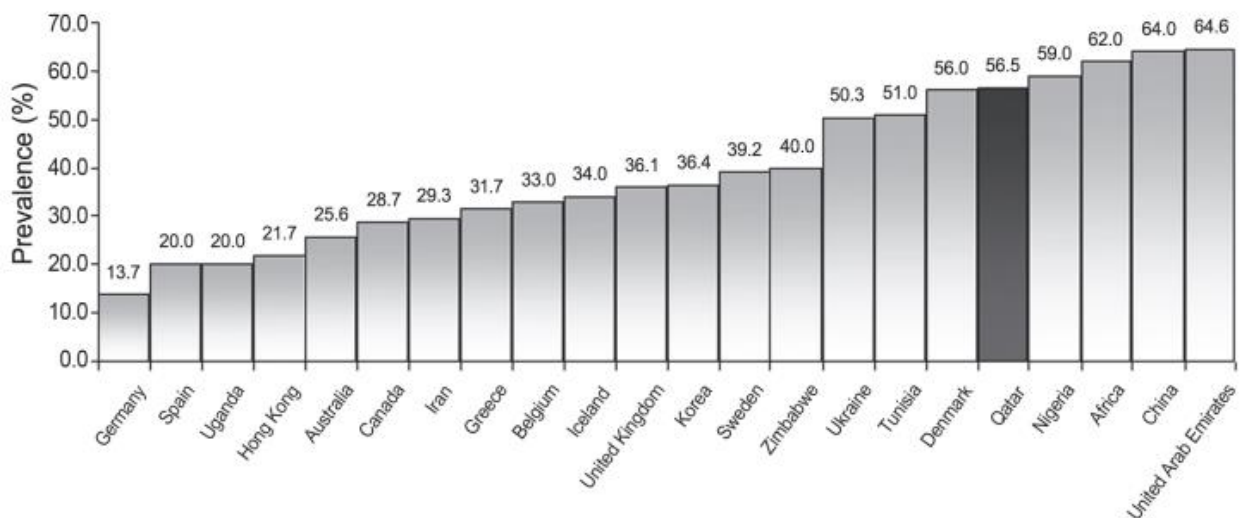


Fig. 2. Global comparison of prevalence rates of low back pain in the general populations of developed and developing countries.

As you can see, Ukraine ranks eighth on this list with 54% of the population. The leading countries are the UAE and China. It should also be noted that the quarantine restrictions introduced through COVID-19 will also affect demand. For many people, work or study has gone online. This means that people spend even more time sitting, which in turn leads to even greater posture problems.

There are few competitors on the Ukrainian market. Here are the three most popular:

Name of the product	Price
DEXT Smart Led	22 \$
INSTRUCTOR OSANKI (Ukrainian manufacturer)	45 \$
ISWEO TIRAMI-SU	65 \$

The target audience can be divided into two segments: children and adults. This makes it easier for the customer to find its size.

1. "Prevalence and Correlates of Low Back Pain in Primary Care: What Are the Contributing Factors in a Rapidly Developing Country", Article in Asian Spine Journal · June 2014

Business model

The cost of our product is about 14.7 dollars at an exchange rate of 27.60 UAH for 1 dollar.

	UAH	USD
Arduino Nano MCU	220	7,97
2x MPU 6050 (GY 521) IMU	50	1,81
HC-05 (ZS-040) BLE module	80	2,90
220 ohm, 1K and 2K Resistors	0,5	0,02
LED	5	0,18
Mini-USB Cable	50	1,81
Total	405,5	14,69

As demand is quite high in Ukraine, it is worth testing sales at the regional level. Given the above data on competitors' prices, we can conclude that setting the price at \$ 18 will be quite optimal. Later, when a particular customer base is formed, the price can be raised to \$ 25.