P118. The length of the sport practice in swimming: A survival analysis approach

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INTRODUCTION

The main concern of a sport organisation should be creating and retaining customers, where retention is fundamental (Tharrett & Bedford, 2012) and increasing the customer lifetime value is essential for the evaluation of the performance of the organisations (Gupta et al., 2006).

Retention in sports contributes to the increase of the athletes' health promotion (Siedentop, 1983; Seefeldt & Vogel, 1986), economic benefits (Shephard, 1986; Wang, Pratt, Macera, Zheng, & Heath, 2004), and bigger capacity for the athletes to be developed into international competitors (Green & Oakley, 2001). The duration in the sport practice can be targeted using the dropout, analysed using survival analysis, which is well-suited to study the timing of events in longitudinal data (Singer & Willett, 1993). The aim of this study is to predict the survival time in the swimming practice and the factors that contribute to a longer duration.

METHODS

The duration is analysed using survival analysis, measuring the time that a swimmer practices in a sport facility. The dataset as N= 2653 customers (n=1536 female 19.62± 15.79 years) and n=1117 (20.03±16.5 years) from a Portuguese sport facility, retrieved using the e@sport (Cedis, Portugal) software, corresponding to the period from 1 June 2014 until 31 October 2017. All data was pseudonymized ensuring that it is not attributed to an identified or identifiable natural person.

RESULTS

The survival time of the swimmers during the first 12 months of practise in a sport facility, showed that there is a risk of dropout of 52% (Figure 1), with an estimated median survival of more 22 months. The multivariate Cox´s regression identified the variables "Days without frequency", "Total amount billed", "Number access", "Number of contract renewals" and "month" contributing to the increase of the time of survival.

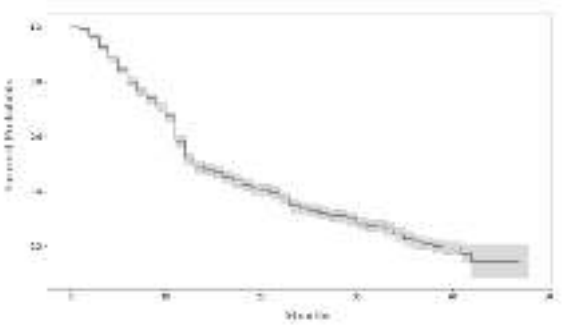

Figure 1. Kaplan- Meier survivor curve of the swimmers, between June 2014 until October 2017.

CONCLUSIONS

There is an increasing interest in the dropout problem in sports, especially in the rapidly growing children's and youth sports, in which attrition is extremely high (Salguero, Gonzalez-Boto, Tuero, & Márquez, 2003). The understanding of which factors contribute to the survival time allows to identify risk factors and when should measures to reduce the dropout be applied, giving these information to the managers to define lines of actions to reduce the dropout. The "Days without frequency", "Total amount billed", "Number access", "Number of contract renewals" and "month" increase the survival time of the swimmers giving indicators to support the development of countermeasures to reduce dropout.

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