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Effect of psychology consultation on subsequent general practitioner doctor consultations

Abstract: *The literature is undisputed regarding the impact of mental health on public health, and there has been an increase in the use of primary healthcare, in particular, the consultations of general practitioners (GPs), with issues at this level. In the literature on the subject, the psychological intervention has been indicated as a positive factor in reversing this trend, and it is in this context that the present study was developed. We intend to explore the differences in the number of GP consultations prior to and after the psychology consultation in a Primary Healthcare Centre (PHC). To this end, data from 845 healthcare center users were collected between June 2004 and September 2014. Student's t-test and mixed analysis of variance (ANOVA) was performed. The results point out a decrease in the number of GP consultations in the period subsequent to the first psychological consultation. We discuss that psychological intervention seems to have a positive effect, not only in improving the mental health of the population but also in the containment of costs in the health sector. The importance of the role of psychology in PHC was assumed.*

Keywords: *psychology, general and family medicine, primary healthcare, effect*

Introduction

Mental disorders are one of the major public health challenges in Europe, reaching approximately 25% of the population each year (World Health Organisation [WHO], 2015). The Portuguese reality is no different. Since 2011 there has been an increase in the registration of users on primary healthcare with mental disorders, making Portugal one of the countries with the highest prevalence of mental illness in Europe (Directorate General for Health [DGS], 2017). At the same time, the consumption of psychotropic drugs increased between 2012 and 2016, which generated an increase in expenses in Portugal's National Health System (Sistema Nacional de Saúde [SNS]), therefore, a special focus must be given to rationalizing the prescription of these drugs (DGS, 2017).

On this matter, a number of studies argue that psychological intervention seems to promote a reduction in psychotropic drugs consumption (Layard et al., 2007; Regalado et al., 2017; Hunsley, 2002a), decrease the number of consultations with GPs (Harkness & Bower, 2008), less health-related spending (Hunsley, 2002b), making it profitable and resulting in an increase in patient well-being (Layard et al., 2007). According to Hunsley (2002b), brief psychological interventions in healthcare centers enable a 50% reduction in the number of subsequent medical consultations. Moreover, Carlson and Bultz (2003) indicated a reduction of approximately 47% in visits to the GP, and Hunsley (2002a) suggest a reduction of approximately 48% in the number of medical prescriptions and 45% in emergency consultations. In a Portuguese study by Hespanhol, Veiga and Ricou (2005), it was verified that psychology consultations in a healthcare center contribute to a reduction in the workload of GPs with patients who attend these consultations. For this reason, the importance of integrating psychologists in primary healthcare in

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multidisciplinary teams has been defended (Fernandes, Basílio, Figueira, & Nunes, 2017; Thielk, Thompson, & Stuart, 2011).

Primary healthcare (PHC) is the first-line services, thus, it is natural that people turn to GPs (World Organisation of Family Doctors [WONCA], 2011), and these are the ones who promote the connection with other specialties (DGS, 2017). However, GPs often encounter patients with medically unexplained symptoms, which promotes feelings of defiance and frustration in both physicians and patients (Edwards, Stern, Clarke, Ivbijaro, & Kasney, 2010). The connection between different professionals can promote an improvement in the continuity of care and help GPs to identify the problem and its referral (Fernandes et al., 2017). The Canadian Psychological Association (CPA, 2017) argues that psychologists and family physicians are natural allies in PHC. Psychologists appear to contribute to a reduction in the costs of mental illness in PHC, and their integration into this service fosters faster access to psychological services, reducing stress on the physician. In addition, these patients seem to see psychologists as the most appropriate professionals to deal with their problem, which increases their trust in services (CPA, 2017). For example, in Portugal, the decrease in productivity of the active population, in particular in relation to absenteeism, appears to be associated with psychological problems, which may affect a company's turnover by approximately 300 million euros per year (Portuguese Psychologist's Association [Ordem dos Psicólogos Portugueses – OPP], 2014). Despite these figures, access to psychological healthcare in Portugal is still limited, particularly at the primary healthcare level. To meet this need, the OPP (2015) advocates a set of priorities to promote psychological health in the SNS. According to this set of priorities, and considering the scope of this research, we emphasize the increase in the number of psychologists in primary healthcare and in the SNS in general.

In addition to the reduction in direct costs (e.g., medical consultations, psychopharmaceuticals), the literature also indicates the impact that psychological intervention can have on reducing indirect costs, namely a reduction in sickness and absenteeism costs (Carlson & Bultz, 2003; Hunsley, 2002b). Psychology, therefore, appears to significantly contribute to improving the mental health of the population, as well as reducing health spending (CPA, 2017; OPP, 2011, 2014).

The present study stems from the need to invest in research adjusted to the Portuguese reality that demonstrates the relevance of psychology professionals in PHC. Particularly, we intend to explore if there are a decrease in the number of GP consultations performed after the patients attended the psychology consultation in PHC. We aim to contribute to a deepening of the knowledge about the role of psychology consultation in PHC in the Portuguese context. Based on the literature, the possible contributions that psychology consultation can have on PHC are discussed, namely the rationalization of resources, particularly the reduction in the overconsumption of GP consultations.

Method

Participants

The study sample is composed of 845 subjects with a mean age of 38.75 years old ($SD = 16.48$), ranged between 18 and 91 years old.

The sample was distributed in two groups: one group composed by the subjects who attended one or two psychology consultations ($N = 323$) and another group included those who attended three or more psychological consultations ($N = 430$). Were accounts the number of GP consultations that each client attended six months prior to the first psychology consultation and six months after.

Materials and Procedures

The psychological service is integrated into the health care center and is made up of psychologists, members of the Portuguese Psychologists' Association. A cognitive behavioral intervention was used. According to the literature (e.g., Beltman, Voshaar, & Speckens, 2010; Høifødt, Strøm, Kolstrup, Eisemann, & Waterloo, 2011) is widely used in primary health care due to its low cost and high effectiveness. The referrals for the psychological consultation are made by the GPs, that is a requirement from Portugal's National Health System.

The data were collected between June 2004 and September 2014 through the computer program Higia – Medical Software 7. Statistical analysis was performed using the *Statistical Package for the Social Sciences* (IBM SPSS, version 23.0). All statistical assumptions were verified and fulfilled. Descriptive statistics (mean, standard deviation, minimum and maximum values) and inferential statistical analyses were made. The Student's *t*-test for paired samples and mixed analysis of variance (ANOVA) were used.

The differences in the number of GP consultations between groups were analyzed through the Student's *t*-test. The interaction effect of psychology consultations on the number of subsequent GP consultations was analyzed through a mixed ANOVA, in which the number of GP consultations six months prior and six months after the first psychology consultation was considered an intra-subject factor, and the number of psychology consultations performed (one or two consultations and three or more consultations) was considered an inter-subject factor.

All necessary ethical procedures were fulfilled, assuring the anonymity of each participant. The ethical approval was obtained from the ethics committee of the health center at which the study was conducted.

Results

Prevalence of GP consultations six months before and six months after the first psychology consultation

The sample was analyzed taking into account two periods on time: six months prior to and six months after the first psychology consultation. In each period, the sample was categorized according to the number of psychology consultations (Table 1).

Table 1. Descriptive analysis of the sample

Number of GP consultations	Number of psychology consultations	*N*	*M*	*SD*
6 months before	1 or 2 psychology consultations	337	4.37	2.63
	3 or more psychology consultations	508	4.43	2.84
	Total	845	4.40	2.76
6 months after	1 or 2 psychology consultations	337	2.85	2.33
	3 or more psychology consultations	508	3.30	3.22
	Total	845	3.12	2.91

Table 2. Difference in the number of GP consultations due to the first psychology consultation: Student's *t*-test for paired samples

Number of GP consultations	*N*	*M*	*DP*	*t*
6 months prior to the first psychology consultation	845	4.40	2.76	14.54***
6 months following the first psychology consultation	845	3.12	2.91	

*** $p \leq .001$

Comparison between the period before and after the first psychology consultation

The mean comparison was performed using the Student's *t*-test for paired samples. From the analysis in Table 2, it can be seen that the mean number of GP consultations significantly decreased six months following the first psychology consultations ($M = 3.12$, $SD = 2.91$). The results show the existence of statistically significant differences, $t\ (844) = 14.54$, $p < .001$, between the number of GP consultations prior to and after the first psychology consultation.

Impact of psychology consultations on the number of GP consultations while controlling for participants gender and age

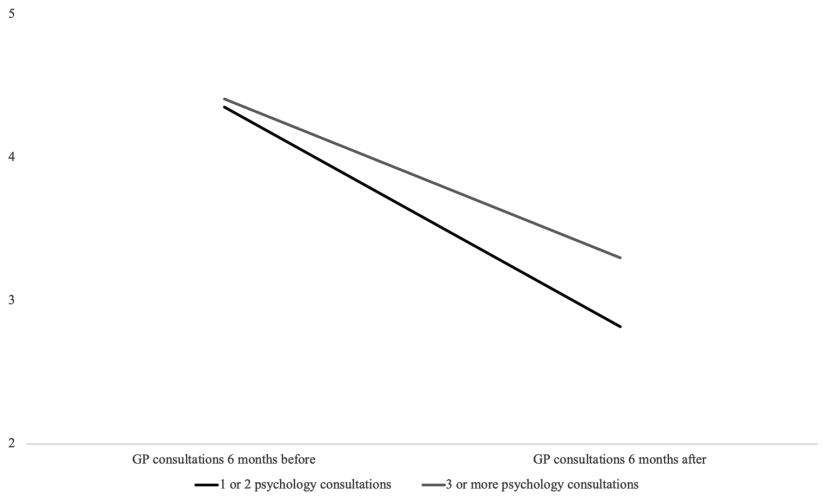
According to the results obtained from ANOVA, a significant decrease in the number of GP consultations was found between the six-month period prior to and after the first psychology consultation, $F\ (1, 749) = 18.06$, $p < .001$. In parallel, there was an interaction effect between the number of GP consultations performed over time and the number of psychology consultations, $F\ (1, 749) = 5.17$, $p = .02$, that is, the combined effect of factors was statistically significant.

As depicted in Figure 1, the number of GP consultations decreased over time in both groups, when controlling for participants' gender and age.

Discussion

According to the literature, the psychological intervention has demonstrated its effects not only in improving the mental health of the population but also in the containment of costs in the health sector (Carlson &

Figure 1.



Bultz, 2003; Hunsley, 2002a; OPP, 2011, 2016). The results obtained in the present study seems to indicate that the frequency of psychology consultations can have a role in the decrease in the number of GP consultations. These results are in agreement with the arguments in the literature regarding the impact of psychological intervention on reducing the number of medical appointments (Carlson & Bultz, 2003; Hespanhol et al., 2005; Hunsley, 2002b). Although the costs of this healthcare center have not been evaluated, considering the literature in this field, it is worth noting that the psychology consultation may be related to a decrease in the health costs, specifically, in the costs associated with the GP consultations. Researches in this domain would be necessary.

Moreover, it seems clear that psychologists promote the satisfaction of health service users (Vasco, Santos, & Silva, 2003). If, in addition to these dimensions, psychological intervention reduces the overuse of GP consultations, then the real cost associated with the psychologist's hiring is clearly lower than their salary. However, it also seems clear that, similar to WONCA (2011), many people seek the practice of general and family medicine for a set of problems that do not have a clear medical response, entering the scope of psychological intervention.

A curiosity found in the present study indicates that the decrease in the number of GP consultations was more pronounced in the group of participants who attended one or two psychology consultations as compared with the group that attended three or more. Several authors have suggested that psychological intervention may often have an immediate positive effect (CPA, 2017; Pattel, Weiss, & Mann, 2010; Ricou et al., 2018). That is, regardless of the type of problem or issue, the person feels understood, and having a professional who shows a willingness to accept it, has an immediate positive impact on the person (CPA, 2017). In this sense, some people do not return to the psychological consultation, regardless of whether they have felt it as positive. It will be evident that in more serious situations this positive effect may cease. Longitudinal studies would be necessary to better understand the evolution of these differences. In addition, follow-up studies may allow a better understanding of the impact of psychology consultation, both in terms of health services and on the psychological well-being of the population.

The difference founded may also be explained by the severity of the presented problems or by the fact that some of these patients presented with medically unexplained symptoms. In fact, such patients, if they can benefit from psychological intervention, also need medical attention. According to Edwards and collaborators (2010), the idea that GPs tell these patients that they do not suffer from any identified pathology, leaving only the option of psychological problems, may be counterproductive. In this sense, it is recommended that these patients should continue to be followed from a medical point of view, promoting their understanding, respect, and support. Accordingly, an integrated intervention between the GP and the psychologist is preferable with these people, which can be reflected in the smaller decrease in medical appointments. In this sense, it would be important that later studies consider the diagnosis of the participants, or at least a clear identification of the problem, to better clarify these differences.

Scientific evidence indicates that psychology in primary healthcare can play a key role both in mental health costs and in the psychological well-being of the population (OPP, 2016). In this context, the WHO (2015) defined the integration of mental health care in primary healthcare as one of its objectives, with the purpose of making this care more accessible to those who need it. So, there is a need to adjust the insufficient number of psychologists working in primary healthcare (OPP, 2015) in order to respond effectively to the needs of the population.

In addition to the suggestions for future research that were made throughout the discussion of this study, some limitations must be a highlight. The lack of a comparison to patients who did not attend a psychology consultation does not allow us to evaluate the effectiveness of psychology consultation. A control group would be needed for this purpose. Outstanding to this limitation the potential effect that the psychology consultations can have on the GP consultations are explored.

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