

• Review

The questionnaire on autonomic regulation: a useful concept for integrative medicine?

Matthias Kröz^{1,2,3,4}, Marcus Reif⁵, Danilo Pranga¹, Roland Zerm^{1,2}, Friedemann Schad^{1,2}, Erik Wim Baars⁶, Matthias Girke^{1,2}

1. Research Institute Havelhöhe, D-14089 Berlin, Germany

2. Department of Internal Medicine, Havelhöhe Hospital, D-14089 Berlin, Germany

3. Institute for Social Medicine, Epidemiology and Health Economics, D-10117 Berlin, Germany

4. Institute for Integrative Medicine, University of Witten/Herdecke, D-58313 Witten/Herdecke, Germany

5. Society for Clinical Research, D-10623 Berlin, Germany

6. Professorship Anthroposophic Healthcare, University of Applied Sciences Leiden, NL-2300 AJ Leiden, the Netherlands

ABSTRACT

The concept of autonomic regulation (aR) reflects the relevance of the function of different autonomic systems for health. aR can be captured by questionnaires. We differentiate between a trait or constitutional aR questionnaire version including 12 (short-version) or 18 items, respectively, with three subscales (orthostatic-circulatory, rest/activity and digestive regulation), and an 18-item state aR questionnaire on the preceding week with four subscales (rest/activity, orthostatic-circulatory, thermo- and digestive regulation). The validated questionnaires show satisfying to good reliability and robust validity with clear construct validity. In this article, we summarized the actually available literature on aR and the use of aR questionnaires in clinical and observational studies. We described the relationship of high aR with health and in case of low aR or loss of regulation with disease and functional disorder in the three (four) different subscales and functional systems, such as rest/activity, orthostatic-circulatory or digestive regulation (thermoregulation) with the consecutive therapeutic need. Finally, we gave perspectives of its further application in clinical research.

Keywords: anthroposophic medicine; autonomic regulation; delivery of health care; integrative medicine; questionnaire

Citation: Kröz M, Reif M, Pranga D, Zerm R, Schad F, Baars EW, Girke M. The questionnaire on autonomic regulation: a useful concept for integrative medicine? *J Integr Med*. 2016; 14(5): 315–321.

1 Introduction

Over the last two decades, patient-reported outcomes (PROs) such as health-related quality of life (HRQL) have received major attention in medicine in general and particularly in patient-centred disciplines^[1,2]. Integrative medicine in general and anthroposophic

medicine in particular are characterized by an intensive patient-physician relationship with a large impact of patient preferences and PROs^[3]. The National Center for Complementary and Integrative Health (NCCIH, the former NCCAM) defines integrative medicine as a combination of conventional medical treatment with complementary and alternative medicine with some high-



quality evidence of safety and effectiveness^[4]. Other definitions comprise a broader conceptualization. For example, the Consortium of Academic Centers in the United States which extends the NCCIH's definition to include the patient's perspective, the patient-physician relationship, and the healing orientation^[5]. In anthroposophic medicine other elements are taken into consideration, such as the integration of the individual and the biographical perspective^[3,6].

A PRO-based approach for the evaluation of integrative medicine requires constitutional, salutogenesis-^[7] and hygiogenesis-orientated^[8] questionnaires along with conventional standard HRQL questionnaires. Gutenbrunner distinguishes between salutogenesis as more psychological, and hygiogenesis as more physiological-based self-healing process^[9]. A meta-analysis showed established questionnaires on HRQL to be higher correlated with mental health than with physical health^[10]. Therefore, we decided to focus on health in capturing autonomic (physiological) function and regulation. We define autonomic regulation (aR) as the state of regulation of different autonomic functions in the rhythmical change of rest and activity. aR is influenced by constitution, gender, age and disease. In healthy people, aR is a relatively stable trait. Acute illness and chronic conditions lead to reduced aR; this is known as loss of regulation^[11,12]. A far-ranging number of autonomic parameters have been investigated in chronobiological research and have shown—for both rhythmically well synchronised and de-synchronised conditions—a strong impact on health or chronic conditions, HRQL and symptom burden^[13]. In 1920, Rudolf Steiner had already proposed the idea of focusing on autonomic functioning in the context of anthroposophic medicine to obtain information about the mind-body-spirit balance. He postulated the idea that mind/spirit (ego-organization) would significantly regulate the autonomic functioning^[14].

In this article we introduce the conceptual framework of the questionnaires on aR which have been developed in order to evaluate the constitutional background and to add a hygienetic-based practical outcome measure for general medicine and particularly for anthroposophic and integrative medicine.

2 The trait concept, the questionnaires on aR and their reliability and validity

Based on preparatory work from Weckenmann *et al*^[15] the first approach was to develop a rather constitutional-orientated scale capturing autonomic functions on sleep latency, sleep quality, dream recall, ability of pulling oneself together, daytime wellbeing, orthostatic function, acral thermoregulation and sweating. Based on these items,

a first short version questionnaire on aR was developed consisting of 12 items with sufficient internal consistency and good test-retest reliability and validity^[16]. In a further step we evaluated items on digestion, constipation, bowel movement and frequency and integrated them into the aR concept in the context of a large validation study. This led to an 18-item questionnaire on aR with three subscales including orthostatic-circulatory, rest/activity, and digestive regulation, which showed satisfying internal consistency, good test-retest reliability, and convincing factor about analytical differentiation between the subdomains^[12]. The validity analysis revealed positive correlations between high aR and health, better HRQL, better personality presence and thermoregulation^[16]. These results are compatible, on a correlative level, with Steiner's conception of a mind-body-spirit balance without proving it and support the aR theory that a highly regulated and high-performing autonomic functioning is associated with psycho-physiological indicators of mental balance^[14] (Table 1).

3 State aR

The trait version on aR showed a good reliability and validity as described above, but it remained unclear how to differentiate between constitution (how autonomic functions are in general) and the actual state of regulation. Therefore, we started a further validation study to generate a new scale on state aR reflecting the preceding week. All items were adapted from the trait version to questions showing a clear relation to the preceding week. Some items could not be adapted, such as “dizziness from circular motions (when on a roundabout)” and “travel sickness”. Other items were more specific such as “sweating even after light physical activity”, “fine motor skills”, “cold hands or feet” (Table 1). Based on a factor analysis a four-subscale structure was generated (rest/activity, orthostatic-circulatory, thermoregulation and digestive regulation) with a good internal consistency, satisfying test-retest reliability and item total correlation. There was a good concurrent validity with the trait aR-scale and sufficient convergent validity (health, less depression, anxiety, fatigue, better Karnofsky-performance index, thermoregulation, personality marker and HRQL) including a robust discriminant validity and responsiveness (Table 1)^[17].

4 Languages in which questionnaire translations and validations are available

Along with the German original version, forward-backward translations based on the International Society for Pharmacoeconomics and Outcomes Research (ISPOR)

Download English Version:

<https://daneshyari.com/en/article/8693338>

Download Persian Version:

<https://daneshyari.com/article/8693338>

[Daneshyari.com](https://daneshyari.com)