

München, 24.04.2023

External Examiner Review

PhD Candidate: Nikol Vlasáková

Validace dotazníkové metody Developmental Coordination Disorder Questionnaire pro děti ve věku 6–10 let v České republice

Overall Comments

First of all, Mrs. Vlasáková thesis is an impressive work in the field of developmental disorder of motor function of children. The author provides a comprehensive overview of current research in this area, and developed and validated for the first time in Czech Republic a questionnaire for Developmental Coordination Disorders of 6-10 years old children.

Introduction and theoretical background

After a very brief introduction (chapter 1), the author begins in this second chapter with a short overview, and continues with basic definition of concepts with regard to motor skills. In my opinion this is an interesting approach to get into the chosen topic. But it would have been also thinkable to start with a description of the most common theories about motor development. In her thesis Mrs. Vlasáková then describes (chapter 2.2) the determinants and the development of coordination skills, even from a historical point of view. This chapter also includes the description of the motor ontogenesis. As previously mentioned, for a full understanding of motor development, it would have been helpful to briefly describe the most common developmental theories. Really interesting and important is chapter 2.2.2 with the focus on the variability of motor ontogenesis and intercultural differences. In my opinion, this chapter could have been described in more detail (with more international references), in particular the various determinants of motor ontogenesis. The author then continues in describing the assessment and measurement of motor development (chapter 2.3). It would have been important in this chapter to describe the various motor test

measures more comprehensively, since the assessment via questionnaires is based on this fundament. The following chapters are focusing on developmental coordination disorders (DCDs; chapter 2.5 to 2.8). From my point of view, this is the “theoretical core” of the dissertation, and especially the basic descriptions are very important. In these chapters (2.5 to 2.8) the author shows, that she has a deep insight into the topic, because she uses many references. After these “basic” chapters, Mrs. Vlasáková introduces (chapter 2.9) into the possible measures for assessing of DCDs (diagnostics). It is commendable that the author describes several consequences of DCDs, which were published in international studies in the last years (chapter 2.10). Although the chapter that focuses on intervention is important and well described, one would have expected to review the international literature more systematically. The continuation with chapter (2.12) is, from my point of view, surprising. Perhaps, this should have been described in a separate chapter or even in the methods. After introducing DCDQ, Mrs. Vlasáková also describes the history and main aspects of the questionnaire.

Altogether I was wondering, whether a different structure of these first chapters would have been clearer. For example, starting with the fundamental developmental theories, terms, concepts of motor development and the motor abilities/skills, and then going on with the different methods for assessing the motor development and especially DCDs. Another point is, that in some chapters the author gives a very broad and comprehensive insight into the aspects, with the objective showing the reader that she has knowledge in all dimensions of the chosen topic. Thinkable is, to reduce the information and to deepen the main aspects.

Problem and aims of the dissertation

In the chapters 3 and 4 the author is first focussing on the problem in the chosen research area, and then describes the aims of the dissertation, including several hypotheses. Although this is logical, I asked myself whether it would not have been important to justify and derive the hypotheses even better with the current state of research. In my opinion, the link between the current, international state of research and the hypotheses is missing at this point.

Methods

In this chapter (5) the author gives a deep insight into the development of the DCDQ for children in Czech Republic. The process and the development with the several stages is transparent and well described. Also, the intercultural adaptation follows international standards and the samples involved seem to be appropriate. The author demonstrates that she has deep knowledge in the field of research methodology, and that she is able to use different methods in her own study.

Results

This chapter compromises the validity (chapter 6.1), the reliability (chapter 6.2), and the adaptation (editing) of the questionnaire. In particular, the validity is described very comprehensively, but some minor mistakes are included. For example, in the tables 10 and 11 a p-value of 0.0000 is mentioned. And the numbers of these tables are not correct (table 71). It would also make reading easier, if chapter 6.1 was divided into sub-chapters with headlines.

Discussion and Conclusions

On the last pages of the thesis, Mrs. Vlasáková discusses the main objectives and results of her dissertation (chapter 7). She then continues in the conclusion (chapter 8) with a summary of the main findings and shows how the research field in measuring DCD could be expanded. In this chapter, a critical discussion about the strengths and limitations of the own study is missing. But in my opinion, it is absolutely necessary to reflect the own research. Altogether the discussion as well as the conclusion chapter are very short. It would have been desirable if the discussion, especially the own methodological approach and the results, had been reflected more comprehensively. Overall, these statements remain very superficial.

Strengths and limitations

There are some minor errors in the structure and content of this thesis. First, it is hardly to understand why the author did not undertake some sort of a systematic review of the international studies (review of literature), published in the chosen topic. Although Mrs. Vlasáková has included many references in chapter 2, it is not clear if the international literature is fully considered. The formulation of the hypotheses as well as the discussion of the results could have been better founded. Second, I miss the description of the most common theories about motor development. Third, the research methods are presented in several chapters of the dissertation (chapter 2 and 3). Maybe, that a consistent presentation would have been easier for the reader (in one chapter). Fourth, a clear reflection of the strengths and in particular the limitations it absolutely helpful in the research process. Therefore, the author should involve these aspects in case of publishing this dissertation.

In conclusion, Mrs. Vlasáková has conducted a valuable study in the field of motor development, especially the measurement of DCD via questionnaire. She shows, that she is able to gain new findings and to work on a good methodological level. The author also confirms the breadth and depth of knowledge in her dissertation. In summary, Mrs. Vlasáková meets the requirements (criteria) of a doctoral thesis.

Prof. Dr. Filip Mess