

STUDIES USING THE KÖRPERKOORDINATIONSTEST FÜR KINDER (KTK): A REVIEW

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INTRODUCTION

The Körperkoordinations Test für Kinder (KTK)¹ is a test battery for motor coordination (MC) of both children with typical and atypical development. The KTK consists of four items which cover age groups of 5–15 years. Performance scores for each test item are converted to motor quotients (MQ), which are based on norms estimated from 1 228 German children in 1974. Using the MQs individuals can be categorized between having MC disorders and very good MC. To help researchers and practitioners to evaluate the suitability of the KTK for their purposes this review was established.

AIM

The aim of this review was to analyze
(I) the use of the KTK in different studies
(II) categorize the studies' main aims according to the use of the KTK and
(III) provide evaluations of the KTK's use for target populations as reported in the studies.

METHODS

The articles reporting of the KTK were identified through the MEDLINE, PsycINFO, SPORTDiscus, PubMed and Web of Science using the specific search terms and inclusion criteria. 192 potential titles were identified, and 100% agreement obtained between the two authors' when they independently screened the titles and the abstracts of the articles to be selected.

RESULTS

I 42 articles (13 German), published 1975–2013 were selected

- 11 countries; majority in Germany/Belgium (25)
- 40 empirical studies including 18–7175 participants
- 23 studies of typical populations, and 17 of atypical populations (e.g. developmentally delayed, recovering, obese children, patients, and athletes)
- Mostly the KTK scores were reported as MQs categorized relative to gender- and age-specific reference values¹
- 25 different definitions of the KTK outcomes e.g.:
 - "motor or gross motor coordination"
 - "dynamic body coordination or dynamic balance"
 - "motor skills"
 - "KTK scores"



Walking Backwards



Hopping High



Jumping Sideways



Moving Sideways

II Six categories of the articles according to the use of the KTK could be formulated

1. Associations of motor factors with physiological, psychological, cognitive or social variables (30 articles)
2. Intervention or treatment effectiveness on motor outcomes (7)
3. Diagnosis or identification (4)
4. Review of methods (2) plus diagnosis (1)
5. Measurement evaluation (2)
6. Motor evaluation (1) plus measurement evaluation (1)

III Evaluations of the use of the KTK

Following pros were extracted:

- + Reveals motor recovery after trauma (4)
- + Increasingly popular tool (2)
- + Normative tables enable comparisons between studies (1)
- + Not much education needed (1)
- + Same tests to all age groups (1)
- + Not much equipment needed (1)

Some cons were extracted:

- Norm value cut-scores insufficient (too old) for present children (4)
- Assessment errors in special conditions (4)
- Individual and situational factors may affect performances (2)
- Focuses on balance and locomotor aspects, no measure of movement technique, supplementary methods are needed (2)
- Using German norms for other populations is risky (1)

KEY MESSAGE

The KTK has been implemented in different populations and settings. Despite of weaknesses, it has been considered as a suitable tool for evaluation of MC of the targeted populations. We recommend collecting international up-to-date reference values for the KTK. This will create an opportunity to evaluate individual's gross motor coordination relative age- and gender matched peers of other geographic locations and culture.

¹Kiphard, E. J. & Schilling, F. (1974). Körperkoordinationstest für Kinder KTK. Weinheim: Beltz.

