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Family's Important Role for Children's Physical Activity – Gaps in German Research

Die wichtige Rolle der Familie für kindliche körperliche Aktivität – Lücken in deutscher Forschung

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Summary

- › **Regular and sufficient physical activity** is essential for a healthy development of children and adolescents. Current guidelines recommend a minimum of 60 minutes of moderate to vigorous physical activity daily for children and adolescents. Despite this, in Germany, only 22% of girls and 29% of boys are sufficiently physically active, pointing to a great need for physical activity promotion.
- › **Health behaviours** develop in and depend on social contexts, of which family is the most important. Looking at German research on physical activity in youth with regards to family as a possible determinant, the lack of longitudinal data, diversity of representative cohorts and consistent assessment methods make recommendations for health promoting programmes difficult. However, most importantly, no study addressed the role of family or parents in relation to children's physical activity nor the interaction between family/parents and children. Understanding the role of family and parents for the development and maintenance of children's health-related behavioral patterns is crucial for the development of effective interventions.
- › **We need to identify relevant factors**, situations and contexts of beneficial or detrimental family environments and understand the underlying mechanisms of family influences. For this purpose, studies have to have 'family' as the central research topic in relation to children's physical activity, instead of using family as a "by-product" which can be considered as part of many other determinants.

Zusammenfassung

- › **Regelmäßige, ausreichende körperliche Aktivität** ist für eine gesunde Entwicklung von Kindern und Jugendlichen unerlässlich. Internationale Richtlinien empfehlen pro Tag mindestens 60 Minuten körperliche Aktivität in moderater bis intensiver Intensität für Kinder und Jugendliche. Trotzdem sind in Deutschland nur 22% der Mädchen und 29% der Jungen ausreichend körperlich aktiv, was den Bedarf an Förderung körperlicher Aktivität hervorhebt.
- › **Gesundheitsverhalten** entwickelt sich in und hängt von sozialen Kontexten ab, von denen die Familie der wichtigste ist. Untersucht man die deutsche Forschung zur körperlichen Aktivität bei Kindern und Jugendlichen im Hinblick auf die Familie als mögliche Determinante, erschweren das Fehlen von Längsschnittdaten, repräsentativer Kohorten und konsistenten Erhebungsmethoden mögliche Empfehlungen für gesundheitsförderliche Bewegungsinterventionen. Am wichtigsten ist jedoch, dass keine der gefundenen Studien die Rolle von Familie oder Eltern in Bezug auf die körperliche Aktivität der Kinder oder die Interaktion zwischen Familie/Eltern und Kindern untersuchte. Die Rolle von Familie und Eltern für die Entwicklung und Aufrechterhaltung von gesundheitsbezogenen Verhaltensmustern von Kindern zu verstehen ist entscheidend für die Entwicklung wirksamer Interventionen.
- › **Wir müssen relevante Faktoren**, Situationen und Kontexte eines vorteilhaften oder schädlichen familiären Umfelds identifizieren und die zugrundeliegenden Mechanismen familiärer Einflüsse verstehen lernen. Für diesen Zweck müssen Studien das Lebensfeld „Familie“ als zentrales Forschungsthema in Bezug auf die körperliche Aktivität von Kindern adressieren, anstatt Familie als „Nebenprodukt“ zu verwenden, das als Teil vieler anderer Determinanten betrachtet wird.

KEY WORDS:

Mother, Father, Parents, Physical Activity, Overweight

SCHLÜSSELWÖRTER:

Mutter, Vater, Eltern, körperliche Aktivität, Übergewicht

Introduction

Regular and sufficient physical activity, as well as low levels of sedentary behaviour, are essential for a healthy development of children and adolescents (1, 11). Myriads of studies provided evidence for beneficial effects on physical as well as cognitive and mental health in children and adolescents (11). However, in Europe, only 25% of boys and 15% of

girls (17) fulfil the current WHO recommendations of at least 60 minutes of moderate-to-vigorous-intensity physical activity per day (18). In Germany, 22% of girls and 29% of boys (6) meet the recommendations on physical activity. Therefore, there is a need for measures to promote physical activity during childhood.



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German Report Card on Physical Activity

In order to promote health-enhancing behaviours and to summarise the status of child and youth physical activity as well as grade physical activity in different domains and contexts, over 50 countries including more than 20 countries in Europe have started developing so-called Physical Activity Report Cards for Children and Youth (2). The Global Matrix of report card grades on physical activity serves as a public health awareness tool by summarising the status of child and youth physical activity prevalence and action in each country. Germany's first Report Card was published in 2019 (3). It summarizes results of German research regarding four categories and ten indicators of children's physical activity behaviours: daily behaviours (overall physical activity, organized sport participation, active play, active transportation, and sedentary behaviours), individual characteristics (physical fitness), settings and sources of influence (family and peers, school, community and environment), and strategies and investments (government). National surveys, peer-reviewed literature, and government and non-government reports were used to assign grades to the ten Report Card indicators using existing benchmarks.

Family's Importance for Children's Physical Activity

The family is the basic social context where behavioural patterns develop and are maintained (14). What sounds simple on the first view is complex on the second. The influence is multifaceted: Family life implies health-related routines, formal or informal rules, communication, control, structure and support. It serves as a reference point for developing behavioural habits, values and attitudes. Research in the field of health-related behaviours such as physical activity mostly focuses on parents' influence on children's physical activity. A large number of different parenting constructs such as parental support has been studied demonstrating the gate-keeping role of parents. Considering the key role of family and especially parents for children's physical activity, including the indicator 'family' into the Report Card (2) is an important step towards promoting children's and adolescents physical activity. In the case of the German Report Card (3), the inclusion of this indicator leads to summarizing results of German studies and reporting on the status quo of German youth.

German Research on Family Influences on Physical Activity

Three years ago in Germany's first Report Card on physical activity of children and youth, this indicator was graded B- with two-thirds of parents being regularly physically active and 60% of parents supporting their children to be physically active (3). The basis for this grade have been three rather large investigations, two of which used data from the nationwide German Health Interview and Examination Survey for Children and Adolescents (KiGGS), more particularly from one of the modular studies: MoMo (Motor Module).

In order to review the indicator 'family' for the upcoming Report Card in 2022, another search for German research has been conducted. This time, the search included peer-reviewed articles and data from German surveys that were a) published after 2014 and/or not included in the previous German Report Card (3), b) represent German research using German samples, and c) examined youth aged 6 to 18 years. The search included terms related to i) family and parents and ii) physical activi-

ty. Eight research articles and one report of a German health insurance company was included in the pool of research potentially addressing the influence of family and parents on children's physical activity behaviour. Two articles used data from the large-scale Baden-Wuerttemberg-wide study "Join the Healthy Boat" (4,5); three articles rely on the large-scale German-wide representative MoMo data (8,12,15); one article used a medium-sized regional sample in Goettingen (16); and three articles included smaller regional samples (7-10). Furthermore, unpublished data of three studies has been included (KOMPASS Chemnitz, IDEFICS, CReActivity München).

Overall, German studies exist that illustrate the important role of the family and especially parents. For example, Mutz and colleagues (9) as well as Schoeppe et al. (16) showed that parental support and parents' own physical activity are associated with children's physical activity. However, aiming to synthesise the study results, several shortcomings became obvious. First, representative cohorts are lacking, the use of self-report measures (child- vs. parent-report; mother answers for father, use of single items, scarcely validated scales, differing response scales etc.) and the operationalization of constructs such as parental support are inconsistent and heterogeneous. Therefore, comparisons, conclusions and recommendations are difficult. Further, no reports on longitudinal data were found examining the association of parenting constructs and children's physical activity behaviours under a longitudinal perspective. However, most importantly, the results on parental influences solely are more or less by-products; none of the studies we found had the focus on examining the role of family or parents for children's physical activity.

Therefore, we still know too little about the complex relationship between family or parental factors and children's physical activity behaviours; or more concrete: for which physical activity domain is which type of parental influence beneficial and for whom, e.g. age group and gender? Are there differences between parenting of mother and father and what about the influence of co-parenting? Furthermore, it is necessary to include a bidirectional perspective; recent international research indicates that child characteristics and behaviours shape parents' physical activity and parenting behaviour. These and many other aspects will have to be investigated – in an age- and gender-specific manner as a main outcome – in order to put us in the position to promote a health-enhancing physical activity environment for children from a very early age on. Therefore, reporting the status quo is one thing we need to do. Another is to gain knowledge and understand how family / parents affect children's and adolescents' physical activity. Internationally, there is much more in depth research (for an overview, see 13), thus, Germany is well behind in comparison to international research and has to invest substantially in order to close this gap.

Postulation

Promoting children's health-related behaviour such as physical activity is an important aim. However, the development of effective interventions depends on understanding the role of family and parents for the development and maintenance of health-related behavioural patterns. We need to identify relevant factors, situations and contexts of beneficial or detrimental family environments and understand the underlying mechanisms of family influences. Only then, families can be supported in creating health-enhancing family environments or in enabling family/parents to promote their children's physical activity. Therefore, more longitudinal and in-depth national stu- ➤

dies using validated, reliable instruments and methods with sufficient power are needed. First and foremost, however, such studies should be designed to focus on 'family' as a central research topic in relation to children's physical activity, instead of using family as a "by-product" which can be considered as part of many other determinants. ■

Conflict of Interest

The authors have no conflict of interest

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