

# **MSc Epidemiologie**

Vorstellung des Studiengangs 14.03.2023

### Prof. Dr. Gabriele Bolte

Abteilung Sozialepidemiologie, Institut für Public Health und Pflegeforschung



# Konzept des Studiengangs

- Epidemiologie als interdisziplinäre Wissenschaft
- Theorien, Modelle und Konzepte, sowie aktueller Forschungsstand
  - ⇒ konkrete Fragestellungen
- Planung & Durchführung epidemiologischer Studien
- kritische Methodenreflexion und Methodentransfer
- Einsatz fortgeschrittener epidemiologischer/statistischer Methoden zur Lösung gesundheitswissenschaftlicher Probleme
- ➤ Einsatz der gewonnenen Erkenntnisse im Kontext internationaler Epidemiologie-/Public-Health-Diskussionen



# Wen möchten wir als Studierende gewinnen?

- Interesse an einer starken quantitativen Fundierung
- Wissenschaftlich ausgerichtete Berufstätigkeit im Bereich der gesundheitswissenschaftlichen Forschung & Anwendungsfeldern

### Tätigkeitsfelder

- Universitäre und außeruniversitäre epidemiologische Forschungseinrichtungen
- Forschungsnahe T\u00e4tigkeit in staatlichen Einrichtungen (z.B. Gesundheitsberichterstattung am RKI)
- Forschende Industrieunternehmen
- Nationale und internationale Organisationen (z.B. WHO)



# Übersicht Studienverlauf (Semester 1-4)

4 Epi-Master Masterarbeit und Kolloquium Epi-Begleit Begleitseminar zur Masterarbeit

- 3 EpiStat3
  Fortgeschrittene
  epidemiolog. & statist.
  Methoden
- EpiProjekt3
  Projektstudium epidemiologische Forschung Datenanalyse & Interpretation
- 2 Wahlpflichtmodule Spezielle epidemiologische Themen

- 2 EpiStat2
  Epidemiologische und statistische Methoden
- EpiProjekt2
  Projektstudium epidemiologische Forschung Studiendesign & Instrumente
- 2 Wahlpflichtmodule Spezielle epidemiologische Themen

- 1 EpiStat1
  Epidemiologie
  und statistische
  Anwendungen
- EpiProjekt1
  Projektstudium
  epidemiologische
  Forschung Grundlagen & Fragestellung
- EpiSkills
  Skills Lab
  Epidemiologie
- FAFEpi
  Forschungs- und
  Anwendungsfelder
  der Epidemiologie



### Einführende Module im 1. Semester

- FAFEpi: Forschungs- und Anwendungsfelder der Epidemiologie
  - Ringvorlesung zu aktuellen Forschungsthemen
  - Seminar Geschichte, Konzepte und Public Health-Einbettung der Epidemiologie
- EpiSkills: Skills Lab Epidemiologie
  - Wissenschaftliches Arbeiten in der Epidemiologie
  - Übungen zur Literaturrecherche und zu wissenschaftlichem Schreiben
  - Ethik und Datenschutz in der Epidemiologie



# Epidemiologische & statistische Methoden

- 1. Sem. EpiStat1: Grundlagen Epidemiologie und Statistik (dient zur Wiederholung und Festigung der Grundlagen)
- 2. + 3. Sem. EpiStat2 und EpiStat3
- Enge Verzahnung Epidemiologie & Statistik
- Übungen mit Statistikprogrammen
- Viele Studienbeispiele / aktuelle epidemiologische Forschung



# Projektstudium Epidemiologische Forschung

- 1. Sem. EpiProjekt1: Forschungsprojekt Grundlagen
  - Themenfindung Forschungsprojekt
  - SAS-Kurs & Übungen zum SAS-Kurs
- 2. Sem. EpiProjekt2: Studiendesign und Instrumente
  - Seminar Projektbegleitung
  - SAS-Kurs Teil II & Übungen zum SAS-Kurs Teil II
- 3. Sem. EpiProjekt3: Datenanalyse und Interpretation
  - Seminar Projektbegleitung
- Arbeit in Kleingruppen / Forschungsteams Projektplanung und –durchführung, Datenanalyse, kritische Bewertung, Präsentation & Projektbericht



# Forschungsprojekt

### Das Besondere im Epidemiologie-Master:

Sie haben die Möglichkeit, eine (kleine) epidemiologische Studie vollständig

- von der Formulierung der konkreten Fragestellung vor dem Hintergrund der aktuellen wissenschaftlichen Literatur,
- über die Entwicklung des Studiendesigns und der Erhebungsinstrumente,
- sowie die Durchführung der Datenerhebung,
- bis hin zur statistischen Auswertung der Daten und kritischen Interpretation der Ergebnisse

selbst durchzuführen.

Dabei lernen Sie das selbstständige Projektmanagement und den Umgang mit Fehlern und unvorhergesehenen Schwierigkeiten.



# Wahlpflichtmodule im 2. und 3. Semester

3 SWS: Seminar & Übung

### 2. Semester

- EpiKuR Kontext- und Raum-bezogene Epidemiologie
- EpiGV Epidemiologie des Gesundheitsverhaltens
- KlinPharm Klinische Epidemiologie und Pharmakoepidemiologie

### 3. Semester

- MonSurGBE Monitoring, Surveillance und Gesundheitsberichterstattung
- Sozia Epi Sozialepidemiologie
- MolEpi Molecular and genetic epidemiology



### Masterarbeit

## im 4. Semester EpiMaster & EpiBegleit

Masterarbeit (22 Wochen)

Optionen:

- in Form eines Publikationsmanuskripts
- in englischer Sprache
- Durchführung an anderer Einrichtung

### Begleitseminar

- Diskussion Forschungsfrage, Konzept, Daten & Methoden, Ergebnisinterpretation
- Abschluss: Kolloquium

### Aus Projekt 2020 / 2021

© Journal of Sports Science and Medicine (2021) 20, 642-654 http://www.jsum.org.DOI: https://doi.org/10.52082/jsum.2021.642

Changes in Digital Media Use and Physical Activity in German Young Adults under the Covid-19 Pandemic - A Cross-Sectional Study

Jasmin Helbach and Katharina Stahlmann 🖂 Health Sciences Bremen, University of Bremen, Bremen Germany

Many studies observed a reduction of physical activity (PA) and an increase in digital media use in young adults during the COVID-19 pandemic. However, few studies have been conducted in Europe or looked at changes in the association between both behaviors. Hence, this study aims at investigating the changes in digital media use/social media use and PA as well as in its association among young adults in Germany. Cross-sec-tional data of 884 German young adults (mean age 22.36 (±1.99), 76% female) collected via an online questionnaire between Auported on digital media use (smartphone, television, computer, gaming console), social media use (Facebook, Instagram, Snapchat, Twitter, YouTube, TikTok) and PA (days/week of ≥30 min. PA) separately for the period of strict infection control measures n Germany (March - end of May 2020) and for normal times (hefore March 2020). Descriptive statistics of digital media use, so-cial media use and PA were compared between both periods. Linear regression adjusted for sociodemographic and work-related characteristics were conducted for both periods with total media use, the various media devices and social media use, respectively. as independent and PA as dependent variables. Whereas PA did not differ between both periods, mean total digital media use increased by 1 hour during the period of strict infection control measures. Digital media use and social media use were negatively associated with PA in both time periods. Differences in these associations by sex could be found for some digital media devices However, 60% of respondents did not comply with the WHO recommendations for PA. Under consideration of possible recall pias, young adults' digital media use, but not PA, seemed to have terventions are needed to increase PA and to prevent its reduction

Key words: Screen time, social media, exercise, COVID-19,

### Introduction

COVID-19 has a major impact on the individuals and someasures restricting people's movement (Die Bundesrestrictions were imposed as social distancing measures—young adults in Europe. (Robert Koch-Institute (RKI), 2020a). Later, people were

services and going shopping (RKI, 2020b). Over the time, the measures were regularly evaluated and adjusted (RKI, 2021). These strict measures were gradually lifted from the

The restricted everyday life not only affects the social interaction (Ammar et al., 2020), but also the individual health behaviors (Ammar et al., 2020; Rolland et al., 2020) Decole are more likely to have a less active lifestyle than they had before COVID-19, as they stay at home more often, do more sedentary work and have fewer opportun gust 1 and September 30, 2020 were analyzed. Participants reties to exercise (Alomari et al., 2020; Ammar et al., 2020; Colley et al., 2020; Meyer et al., 2020). In addition, screen time and media use has increased (Jia et al., 2020; Keel et al., 2020; Oin et al., 2020). Oin et al. (2020), for instance. examined the effects of COVID-19 on the screen time among adults (18-80 years old) from China. Overall, mean screen time was 262.3 ±189.8 minutes per day with significant higher screen time for young adults (20-29 years)  $(305.6 \pm 217.5 \text{ min per day})$ . Furthermore, Qin et al. (2020) showed that young adults (20-34 years) had a lower level of physical activity (PA) during the COVID-19 pandemic than older adults. Current studies show both a posi tive and a negative association between digital media use and PA. For example, higher video gaming (Ballard et al., 2009) and smartphone use (Grimaldi-Puyana et al., 2020) is associated with a lower likelihood of daily exercise. In contrast, the use of social media, especially sports content such as "fitspiration" posts, can act as a motivator for PA (Raggatt et al., 2018; Shimoga et al., 2019; Vaterlaus et al., 2015). Furthermore, Kenney and Gortmaker (2017) suggest that there are differences in the association of digital nedia use and PA between men and women. Keel et al. (2020), for example, indicate that women had a greater increase in social media use than men who, in turn, had a reater increase in gaming than women during the COVID-19 lockdown. In summary, restrictions that are supposed to protect the people's health simultaneously increase the prevalence of health damaging behavior. For instance, pan ciety (Nicola et al., 2020; Singh and Singh, 2020). To pro-tect people's health and to reduce the spread of the sociated with several physical and psychological health COVID-19 virus, the German government - as did most problems, such as cardiovascular diseases (Mattioli et al., other countries around the world - imposed several 2020), obesity (Jia et al., 2020; Keel et al., 2020), depresgierung, 2021; Roser et al., 2020). In mid-March 2020, cul-Meyer et al., 2020; Qin et al., 2020). However, there is very tural-, recreational- and sport institutions as well as cater- little evidence assessing the impact of COVID-19 infection ing and restaurants were closed, and social contact re- control measures on digital media use and PA among

Consequently, the aim of this study was to assess also ordered to use face masks when using transportation the differences in digital media and social media use during

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BMC Medical Research Methodology

### Restrictions and their reporting in systematic reviews of effectiveness: an observational study

Jasmin Helbach<sup>1\*</sup>, Dawid Pieper<sup>2,3,4</sup>, Tim Mathes<sup>2,5</sup>, Tanja Rombey<sup>2,6</sup>, Hajo Zeeb<sup>7,8</sup>, Katharina Allers<sup>1</sup> and

- Beispiele -Publikationen nach Masterarbeiten der letzten Jahre

> Cancer Epidemiol. 2021 Aug;73:101968. doi: 10.1016/j.canep.2021.101968. Epub 2021 Jun 23.

28-year incidence and time trends of childhood leukaemia in former East Germany compared to West Germany after German reunification: A study from the German Childhood Cancer Registry

Maike Wellbrock 1, Claudia Spix 2, Desiree Grabow 2, Arndt Borkhardt 3, Haio Zeeb 4, Friederike Erdmann 5

Hasselder et al. BMC Geriatrics (2022) 22:219 https://doi.org/10.1186/s12877-022-02896-w

from Germany

**BMC Geriatrics** 

### Abstract

Background: Restrictions in syst is important to report whether an tions regarding language, publica

Methods: A retrospective observ indexed in PubMed between 2000

Results: Of the total 535 SRs incli restrictions considered (language, tion on restrictions regarding pub included SRs. language was restric it was unclear whether the restr restrictions were justified for pub and language in 3.2% (8/248). Diff and non-Cochrane reviews.

Conclusions: This study suggest as well as editors and reviewers increase the transparency of SRs

Keywords: Reporting quality, Me

Department of Medical Bio 20251 Hamburg, Germany; Department of Social Epide 28359 Bremen, Germany; g

Health Sciences Bremen, U

Abstract: The mental healt

6760. https://doi.org/10.3390/ Beroh19116760 and adolescents were associated socioeconomically deprived Academic Editors: Paul B.

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Social Inequalities in the Association between Social Infrastructure and Mental Health: An Observational Cross-Sectional Analysis of Children and Adolescents

Katharina Stahlmann <sup>1</sup>0, Emily Mena <sup>2,3,e</sup>0, Ronny Kuhnert <sup>4</sup>0, André Conrad <sup>8</sup> and Gabriele Bolte <sup>2,3</sup>0



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  kuhnertr@rki.de
   German Environment Ager
- \* Correspondence: e.mena@

status (SES) benefits from a ities in the association bety (2014-2017). KiGGS provid pools, parks) for all children time to SI for a subsample. logistic regression analyses MH problems. Children and deprivation at the municipa SI places At the individual

Keywords: mental health; b

1. Introduction

Mental health probl

in early and later adult

health problems start in

neighborhood levels affect

life events [4] or parental:

while coping strategies a

In particular, children wit

than those with high SES

of mental health problem

etrimental risk factors [

Accepted: 30 May 2022

Kuhnert, R.: Conrad, A.: Bolte, G.

Social Inequalities in the Associat

Mental Health: An Observational

Cross-Sectional Analysis of Childre

Entition, Res. Public Health 2022, 19.

published maps and institutional affil-

On a neighborhood level problems in children livit

Int. I. Emiron. Res. Public Health 2022, 19, 6760. https://doi.org/10.3

### **OPLOSIONE**

OPEN ACCESS

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Published: January 24, 2020

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Bammann K (2020) Amelemmeter, screener

outdoor physical activity is associated with

Proce-certional requite from the OLITHOO

Editor: Joe Robert Nocera, Emory University,

Peer Review History: PLOS recognizes the benefits of transparency in the peer review

process: therefore, we enable the publication of

responses alongside final, published articles. The

all of the content of peer review and author

editorial history of this article is available here

https://doi.org/10.1371/journal.pone.0228053

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doLorg/10.1371/journal.po na.0228053

meteorological conditions among older adults:

ACTIVE study, PLoS ONE 15(1): e0228053, https://

Accelerometer-assessed outdoor physical activity is associated with meteorological conditions among older adults: Crosssectional results from the OUTDOOR ACTIVE study

Birte Marie Albrecht 5\*, Imke Stalling, Carina Recke, Karin Bammann

Institute for Public Health and Nursing Sciences (IPP), University of Bremen, Bremen, Germany

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MDPI

### Abstract

### Background

Meteorological conditions are potential determinants of physical activity (PA). A profound understanding of the determinants of PA behaviour is required for PA promotion. This study examined the association between accelerometer-assessed PA and meteorological conditions among older adults.

This cross-sectional study included data of 577 adults aged 65-75 years living in Bremen, Germany (52% female; 3278 days). PA was measured with accelerometers for seven consecutive days (10/15-08/16). A threshold of 240 lx was used to differentiate between outdoor physical activity (OPA) and indoor physical activity (IPA). Linear mixed models estimated the association between PA (daily accelerometer counts per minute (CPM)) and meteorological factors (temperature, cloud cover, wind, and no precipitation) derived by principal

The analyses showed associations between PA in CPM and the meteorological factors terr perature (93.7; 95%-CL; 64.9, 122.5) and no precipitation (48.4; 95%-CL; 19.8, 77.0) in women and wind (-40.3; 95%-CL: -59.7, -20.8) and no precipitation (30.1; 95%-CL: 5.6, 54.6) in men. After distinguishing in OPA and IPA for a subsample of 128 participants (473 days), the sex differences were no longer present. OPA in CPM was associated with temperature (women: 174.5: 95%-CI : 81.3, 267.6: men: 183.3: 95%-CI : 81.2, 285.4), cloud cover (women: -153.0: 95%-CL: -200.3. -105.7: men: -123.2: 95%-CL: -174.7. -71.7), and wind (women: -118.6; 95%-CL: -189.6; -47.7; men: -96.9; 95%-CL: -177.0, -16.7). No asso ciation between OPA and no precipitation was found (women: 2.9; 95%-CL: -89.0, 94.8; men: -17.1: 95%-CL: -116.7. 82.4).

ations within walking distance can encourage older people to walk. Yet, not all destinant. Little is known about the types of destinations fostering older adults' walking for sized towns and rural communities. The aim of this study was to explore the associaof different destinations and walking for transport among older adults living in commu

September 2019, self-reported data from 2242 older adults (> 65 years) living in the est (Germany) were collected within the project AFOOT - Securing urban mobility of an 137 study participants were eligible for this analysis. Logistic regression models were ship between the perceived destination availability of 19 different destinations within home, respectively, and the engagement in walking for transport. Crude and adjusted r each destination and distance category. Exploratory subgroup analyses examined the lability of destinations within a 20-min walk from home and walking for transport strati ing aid, and car availability

ach of the investigated destinations within a 20-min walk and of nearly all of these des k from home was significantly positively associated with walking for transport in crude mained significant after adjustment for covariates. The strongest associations were found ores, pharmacy, and bakery. The availability of a bus stop showed the weakest associa associated with walking for transport after adjustment for covariates

of local amenities within walking distance may be a promising approach to foster older smaller communities with less than 100,000 inhabitants and to enable active and quantitative and qualitative research is needed to validate these findings and to bette

Nalking for transport, Built environment, Destinations, Neighborhood, Older adults, ge-friendly environment

### Background

r Str. 4, 28359 Breme e end of the article

Destinations fostering older adults'

Pia Hasselder<sup>1,2\*</sup>, Tanja Brüchert<sup>1,2</sup>, Sabine Baumgart<sup>1,3</sup> and Gabriele Bolte<sup>1,2</sup>

walking for transport: a cross-sectional study

The health needs of a rising number and proportion of older adults poses a major public health challenge to many countries in the world [1]. This is especially true for Germany which is one of the countries with the highest

eographical vides a unique vith substantial assessment of

te myeloid n Childhood s in former East

any compared to ease in Fastern eached the nained rather stern Germany est Germany = time in Western 91-2018 = 1.3

n inconclusive

PLOS ONE | https://doi.org/10.1371/journal.pone.0228053 January 24, 2020



# Lehrende im M.Sc. Epidemiologie

- Universität Bremen
- Institut f
  ür Public Health und Pflegeforschung (IPP)

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Prof. Gabriele Bolte, PD Karin Bammann, Dr. Klaus Telkmann, Dr. Stefanie Dreger, ...
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Forschungszentrum Ungleichheit und Sozialpolitik (SOCIUM)
 Dr. Jonas Czwikla, ...

Leibniz-Institut für Präventionsforschung und Epidemiologie (BIPS)

Prof. Hajo Zeeb, Prof. Ulrike Haug, Prof. Krasimira Aleksandrova, ...

in enger Zusammenarbeit mit weiteren Lehr- und Forschungseinrichtungen



# Aufnahmevoraussetzungen (1)

- Erster berufsqualifizierender Hochschulabschluss (mind. 180 CP)
  - Public Health/Gesundheitswissenschaften
  - Humanmedizin
  - Soziologie
  - Psychologie
  - Biologie
  - Mathematik
  - Fach mit inhaltlicher Nähe zu diesen
    - ⇒ Zusatzbogen: Nachweis der inhaltlichen Nähe
- Kenntnisse in quantitativen Methoden (mind. 12 CP),
  - z.B. Epidemiologie, Statistik, empirische Sozialforschung
    - ⇒ Zusatzbogen: Nachweis 12 CP quantitative Methoden



# Aufnahmevoraussetzungen (2)

Englisch-Sprachkenntnisse (Niveau B2)

Deutschkenntnisse
 (für Universität Bremen allgemein geltende Voraussetzungen)

### Motivationsschreiben

- Begründung des Interesses an dem Studiengang
   (eigene Qualifikationen und Ziele, Motivation für Studiengang)
- Bezugnahme auf ein aktuelles epidemiologisches Thema



### Auswahlverfahren

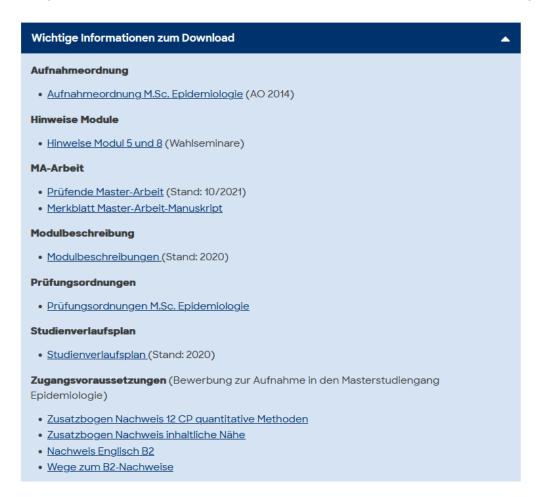
- Pro Wintersemester 20-25 Studienplätze
- Bewerbungsfrist 15.07.
- Vergabe der Studienplätze nach Rangfolge
  - 60% Gesamtnote des Hochschulabschlusses
  - 20% Note einschlägiger Studienschwerpunkte und/oder einschlägige berufliche oder außerberufliche Erfahrung
  - 20% Motivationsschreiben

hohe Chancen auf einen Studienplatz bei Erfüllung der Voraussetzungen!



## Informationen

https://www.uni-bremen.de/fb11/studium/epidemiologie-msc/





Haben Sie noch Fragen? Kontakt:

gabriele.bolte@uni-bremen.de

