

A day in the life of 9 year-olds: Exploring patterns in time-use data

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Introduction

Outdoors, physically active and unstructured play



Indoors, inactive, structured play

- **There are increasing concerns over changes in children's pastime activities**
- **Evidence to suggest links between sedentary behaviour and socio-emotional wellbeing and health**

(Allen & Vella, 2015; Elkind, 2003; Grey, 2011; Louv, 2005; Mahoney et al., 2006; Schor, 2004; Sigman, 2005; Tremblay et al., 2011; Twenge, 2000)



Changes in pastime activities

- **Shortage of children's outdoor play spaces** (Singer, Golinkoff, & Hirsh-Pasek, 2006; Heritage Council of Ireland, 2010)
- **Concerns about child safety / traffic volume** (Carver, Timperio, & Crawford, 2008; Clements, 2004; Singer et al., 2009; Veitch et al., 2006)
- **More structured and organised activities** (Christensen 2002; Elkind, 2008; IPPA, 2006; McCoy, Byrne, & Banks, 2012)
- **Technology is increasing as an important part of children's free time activities** (Downey, Hayes, O'Neill, 2007; Elkind, 2003; Singer & Singer 2005; Singer, Golinkoff, & Hirsh-Pasek, 2006)



Research Questions

- **What does a day in the life of 9 year-olds look like?**
- **What types of activities are children engaged in?**
- **Are there gender differences in the types of activities children are engaged in?**
- **Do the data reflect the shift in children's freetime activities, as described in international literature?**
- **Is there a relationship between children's pastime activities, socio-emotional wellbeing and health?**

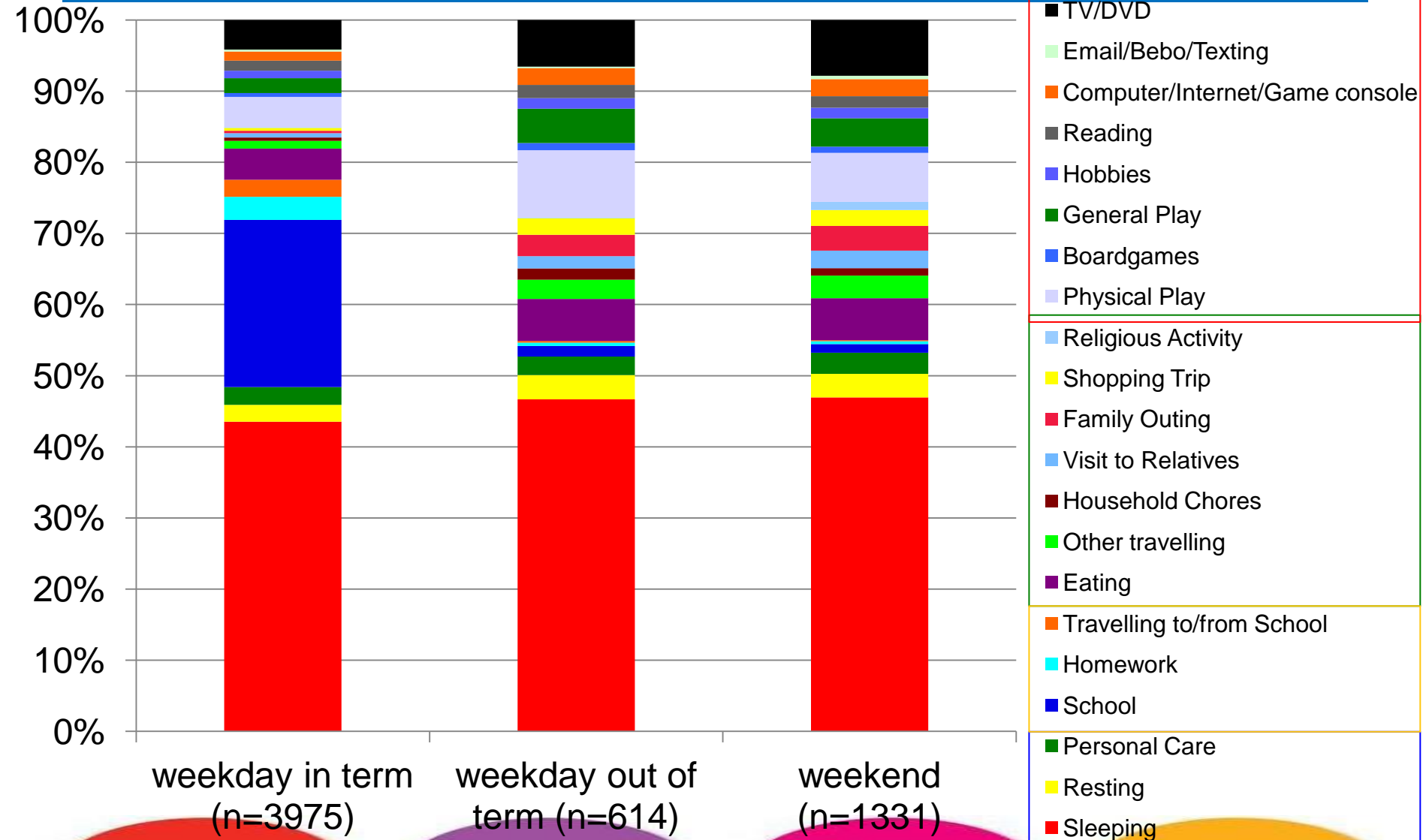


Methodology

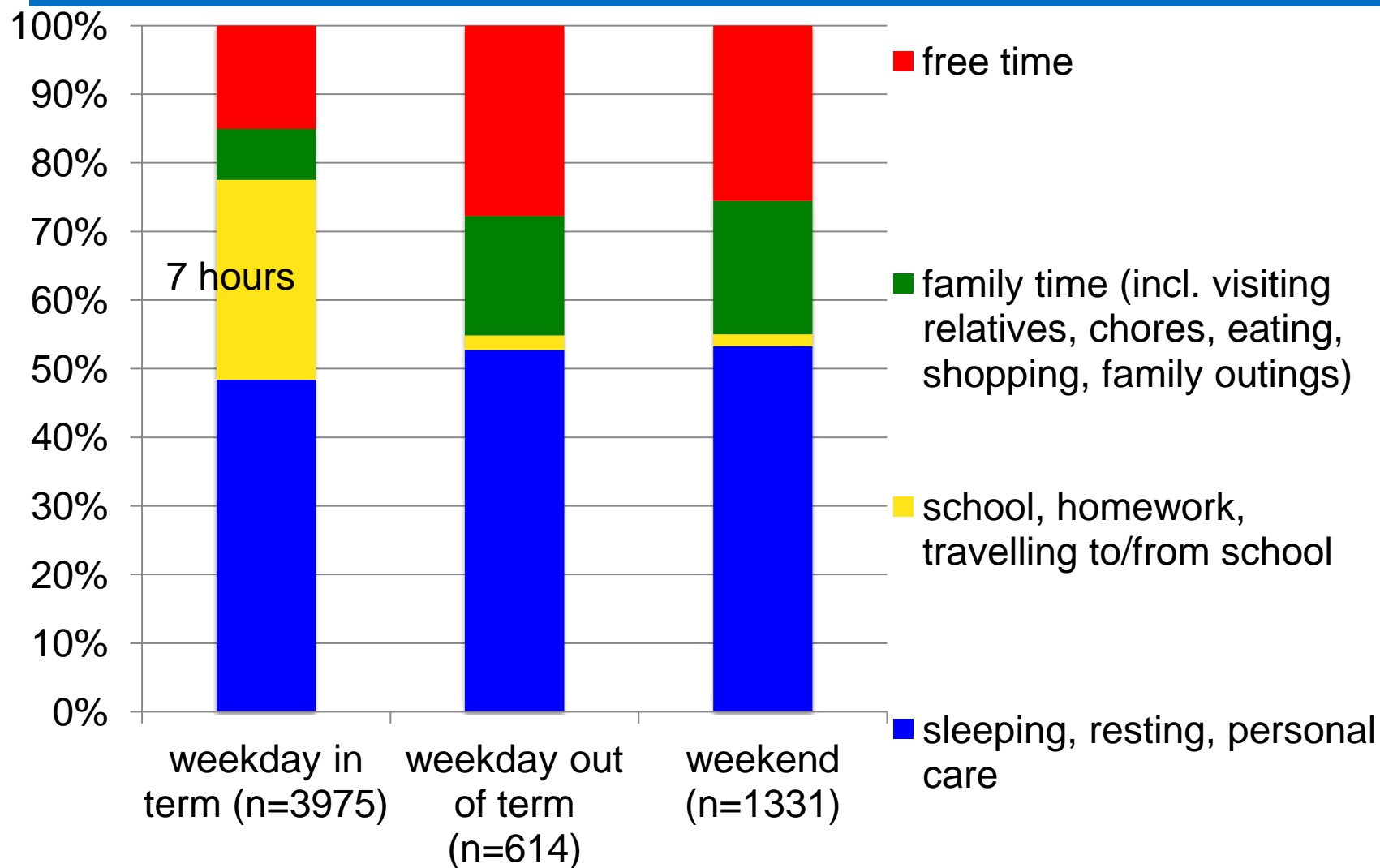
- **Wave 1 “Light“ Time-Use Diary at age 9 (n = 6228)**
- **✓ 21 pre-coded activities in 15 minute intervals for 24 hours**
- **Outcome measures:**
- **Strengths and Difficulties Questionnaire Parent Report (SDQ)**
- **Body Mass Index (BMI)**



Time-Use Data

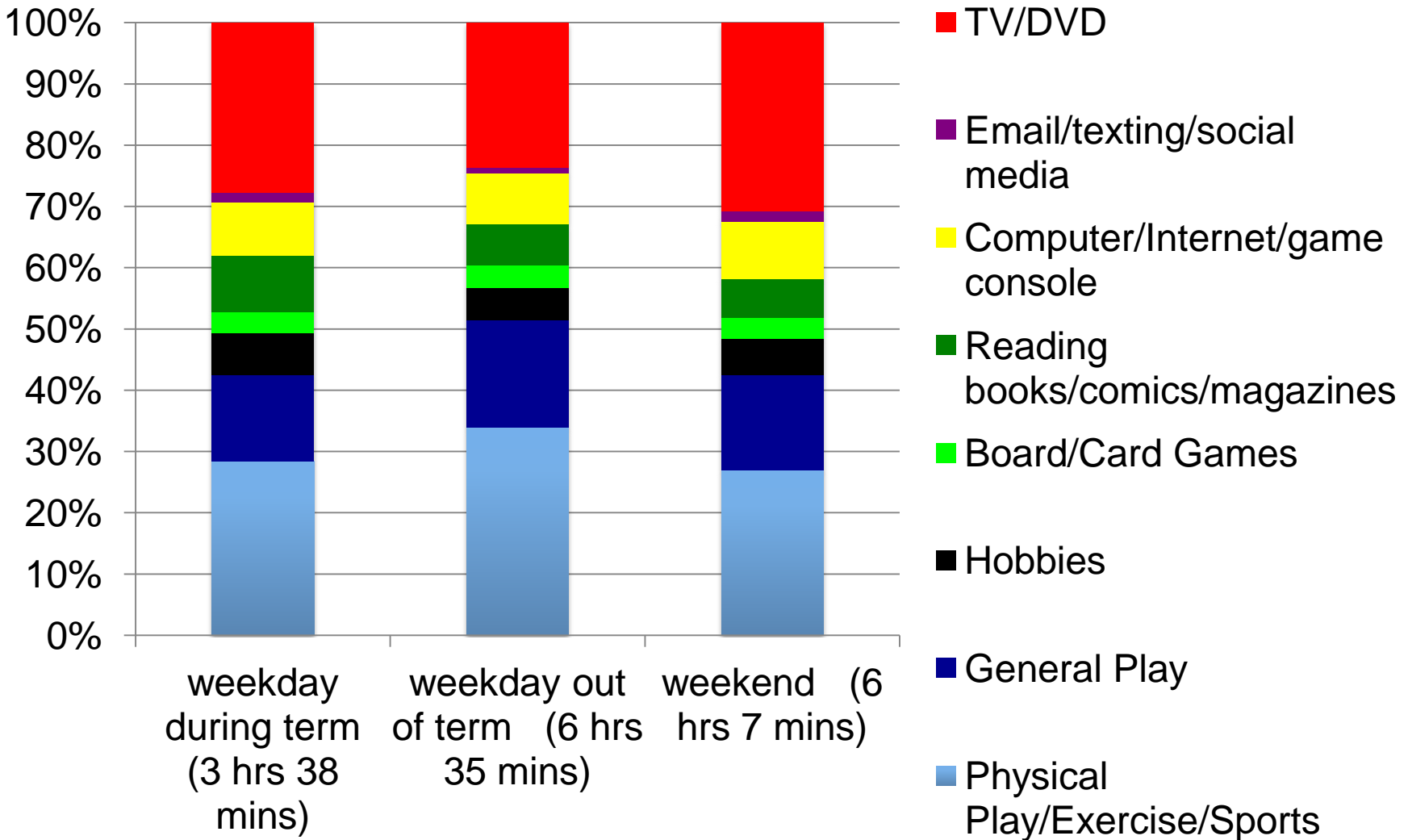


Time-Use Data





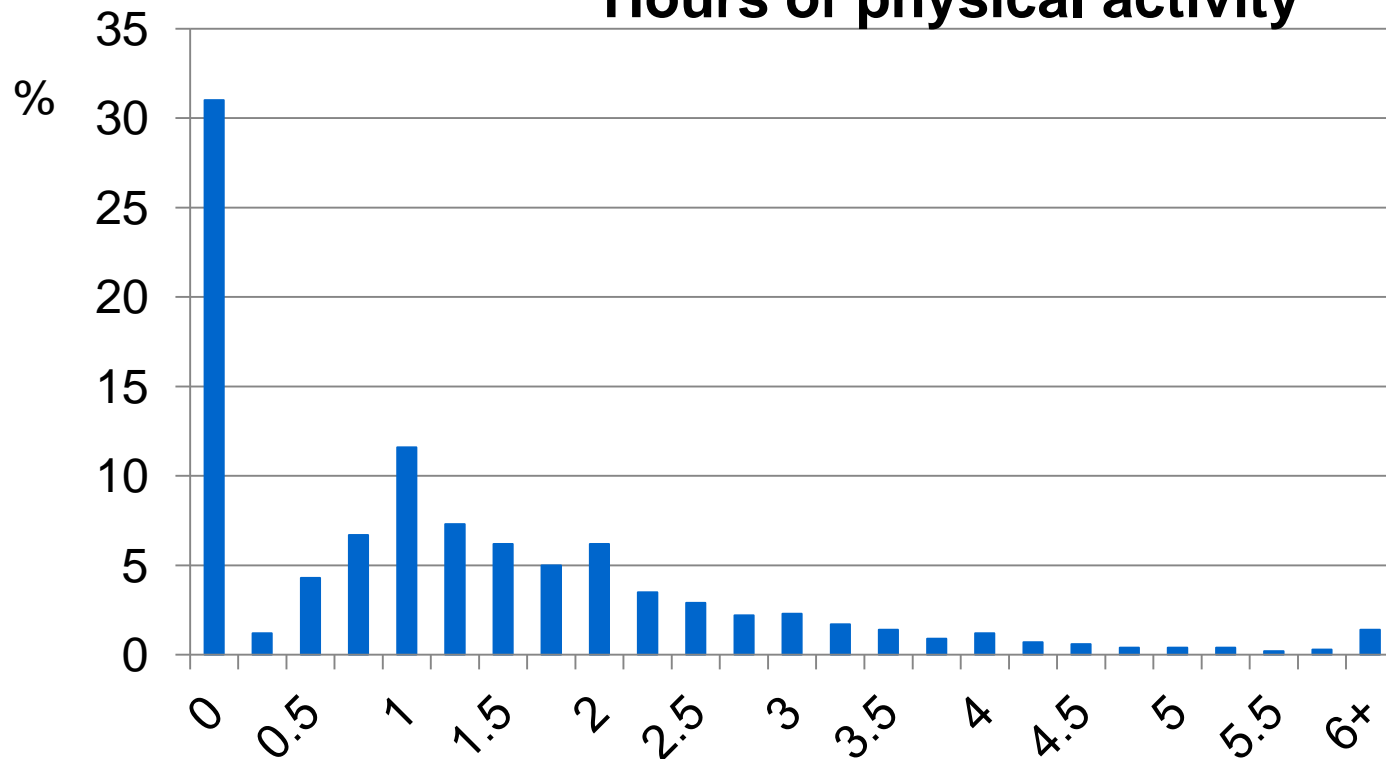
Free Time





Difficulties with Averages

Hours of physical activity



Mean=
1.3 hours

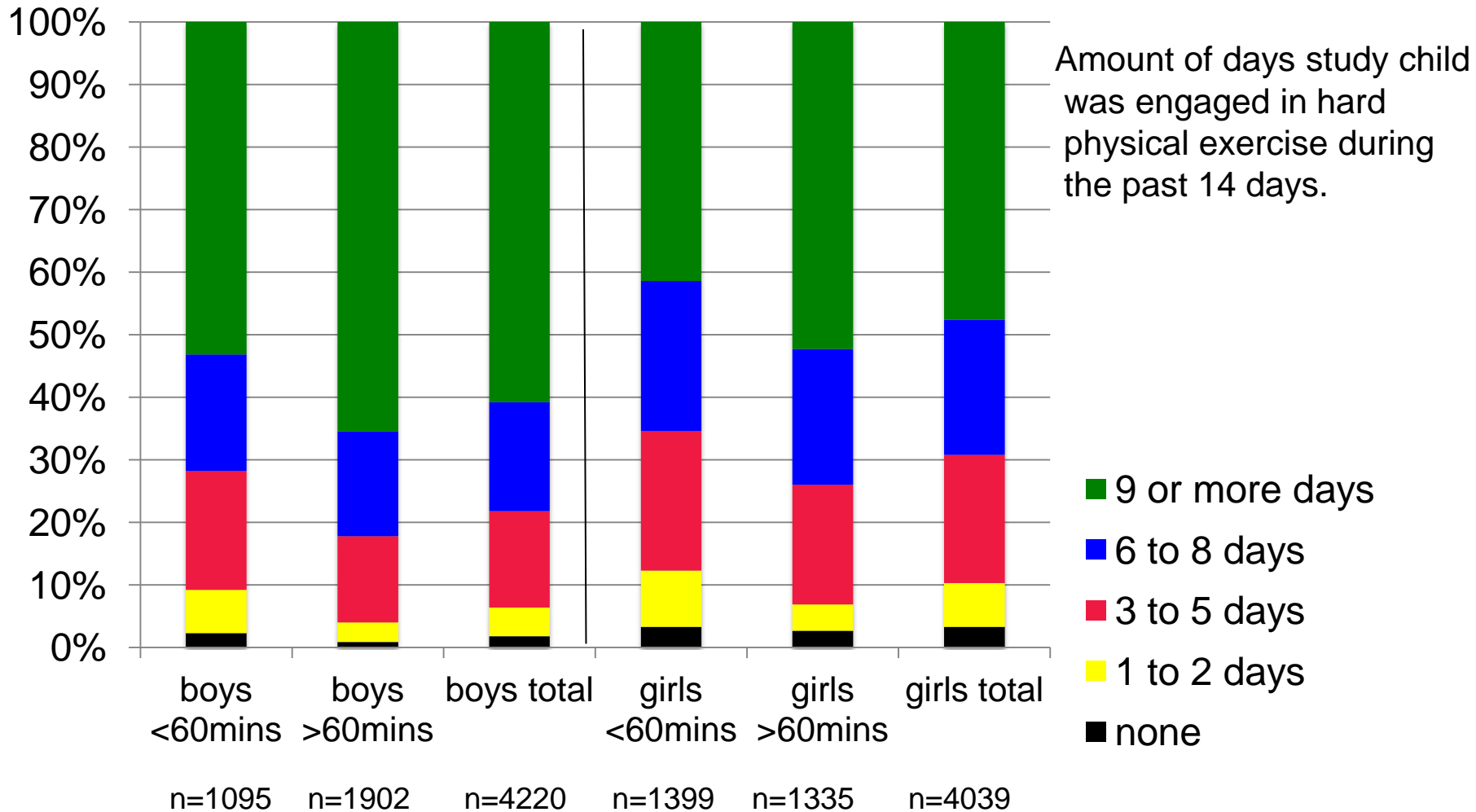
(SD= 1.41)

43.2% of children do not reach the recommended 60 mins per day (36.5% of boys 51.2% of girls)

Time in hours spent with physical play/exercise. N=5921



Physical exercise





Weekday during Term

Family Time	Lower end	%	Higher end	%
n=3975	≤1 hour	29.2%	>2 hours	27%
Travelling to/from School	Lower end	%	Higher end	%
n=3975	≤25 mins	28.7%	>30 mins	33.3%
School	Lower end	%	Higher end	%
n=3975	≤5 ½ hours	27.2%	>6 hours	17.2%
Homework	Lower end	%	Higher end	%
n=3975	≤25 mins	21.4%	>1 hours	20.4%
General Play	Lower end	%	Higher end	%
Boys (n=2026)	No time	62.5%	>45 mins	20.3%
Girls (n=1823)	No time	50%	>1 hour	22.3%



Gender Differences

Boys spend more time:

Physical Play

Computer/Internet/Game Console

Girls spend more time:

Sleeping

Resting

Personal Care

General Play

Hobbies

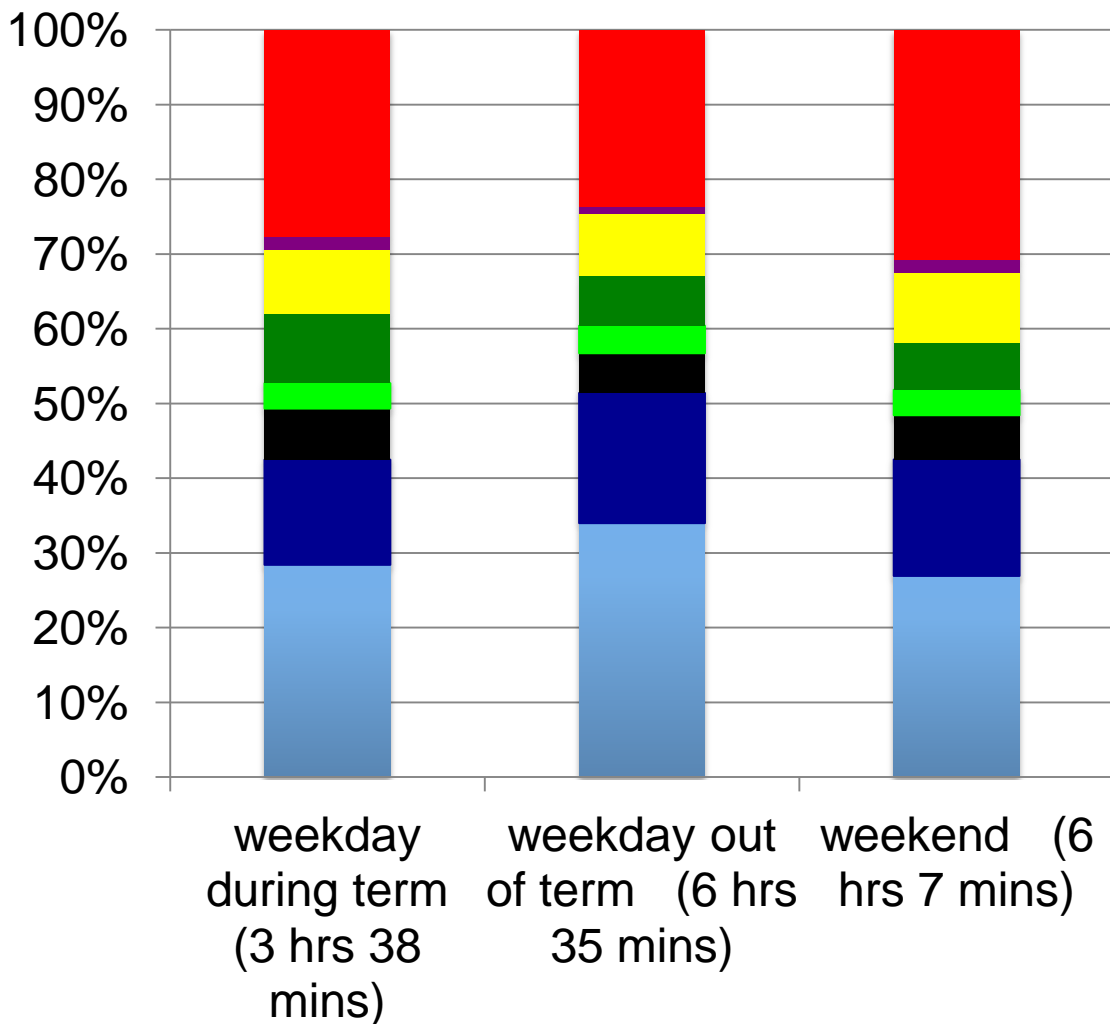
Reading

Household Chores

Religious Activity



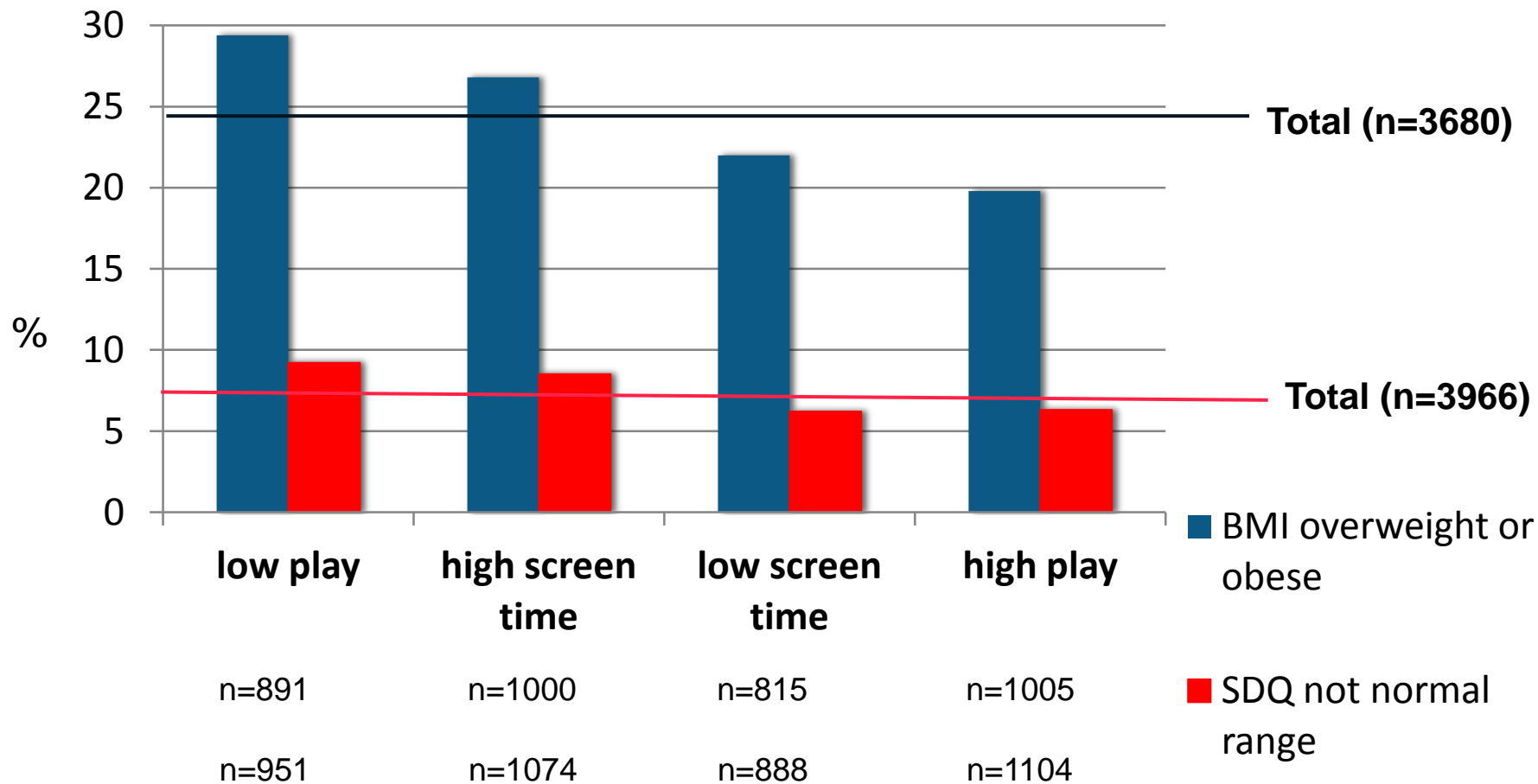
Free Time



- TV/DVD *Screen Time*
- Email/texting/social media
- Computer/Internet/game console
- Reading books/comics/magazines
- Board/Card Games
- Hobbies *Play*
- General Play
- Physical Play/Exercise/Sports

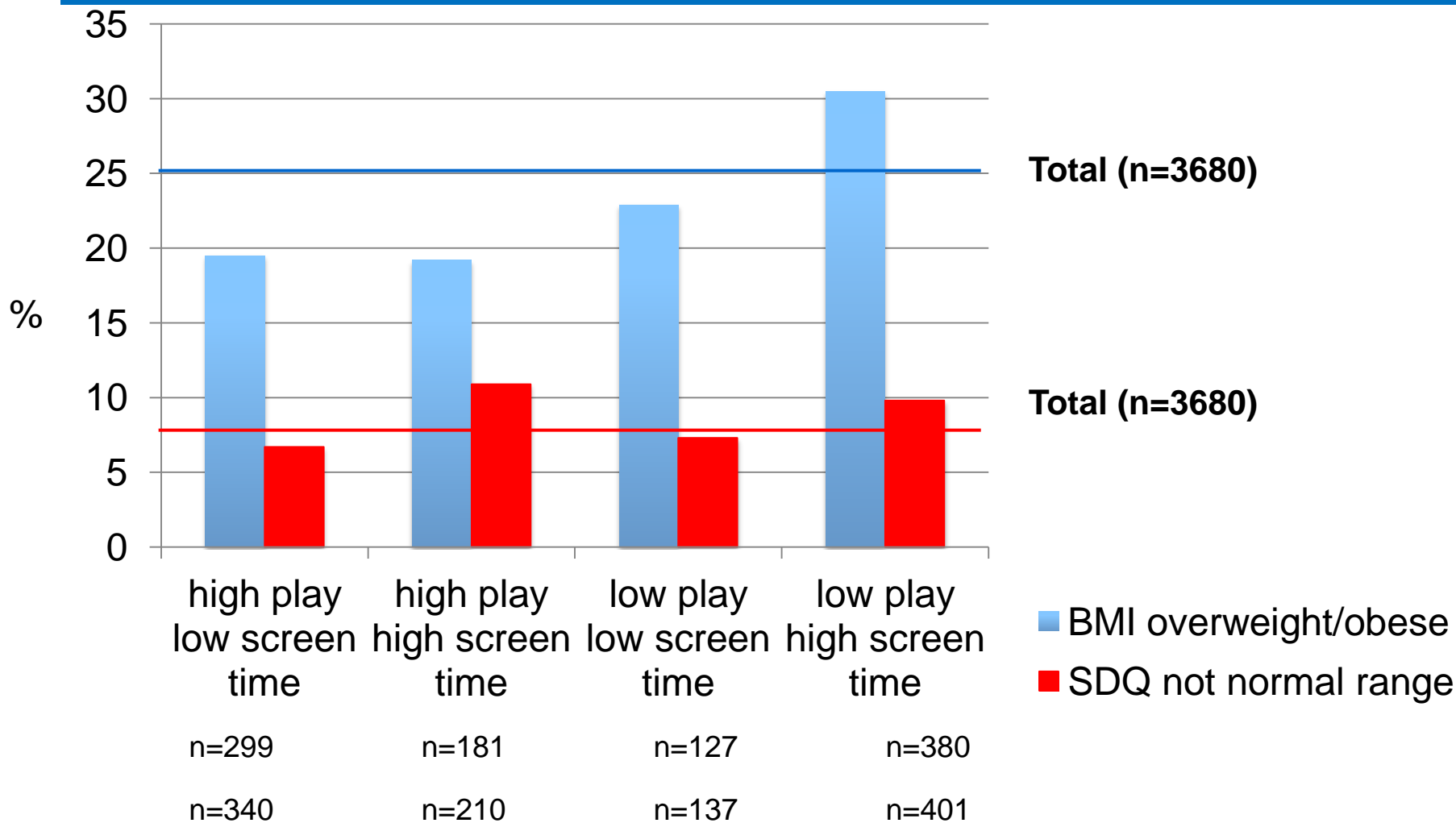


Outcomes (BMI & SDQ)





Outcomes for tail groups





Regression Model

- **Outcome variable: PC's SDQ ratings**
- **Focal Variables: screen time and structured cultural activities**
- **Mediating variables:**
 - ***Child Variables:*** Gender, health, ongoing illnesses, learning difficulty, BMI, amount of close friends, bullying, scholastic performance (Drumcondra reading and maths tests), EAS Temperament scale and adverse life events
 - ***Parent Variables:*** PC's highest level of education, PC depression level, PC parenting style, Pianta Scale
 - ***Family Variables:*** social class, income, family type, number of siblings and family quality time
 - ***Community Variables:*** region, perceived safety of neighbourhood



Regression Model

- **Model 1: Screen time & Cultural activities** 2.3%
- **Model 2: Model 1+ Child Variables** 42.7%
- **Model 3: Model 2+ Parent Variables** 53.3%
- **Model 4: Model 3+ Family Variables** 53.9%
- **Model 5: Model 4+ Community Variables** 54.2%

High screen time and **no cultural activities** significant predictors

Biggest individual contributors:

Child Characteristics (**ongoing illness**, **learning difficulty**, **0-1 close friends**, **low emotionality**, **high emotionality**, **low sociability**)

Parent-Child relationship (**high child-parent conflict**, **low child parent conflict**)



Summary & Discussion

- **During term time, children have little free time**
- **Approx. 1/3 of free time is spent with physical play/exercise**
- **About 40% is spent with screen time (less than 2 hours)**
- **Cannot confirm that children are overscheduled** (Mahoney et al., 2006; Mahoney & Vest, 2012)
- **Large variance among children**

- **Boys tend to be more active than girls, girls engage more in general play and reading**
- **More boys than girls are in the high screen time group**
- **Differences in access to play spaces/type of play depending on gender** (Lee et al., 2015)



Summary & Discussion

- **High play and low screen time associated with lower BMI and fewer behavioural difficulties**
- **Low play and high screen time associated with higher BMI and more behavioural difficulties**
- **Data suggest that there might be a stronger connection between overweight & play and behavioural difficulties & screen time**
- **Support for a link between sedentary time and socio-emotional wellbeing and health** (e.g. Allen & Vella, 2015)
- **Regression shows that other factors are more influential**
- **Regression model highlights the importance of a holistic, bioecological model to explain socio-emotional wellbeing** (e.g. Bronfenbrenner & Morris, 2006)



Thank you!

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