SOCIAL EXCLUSION, DEVELOPMENTAL DISORDERS AND MENTAL HEALTH

NEET-YOUTH IN AUSTRIA AND MENTAL HEALTH PROBLEMS, EARLY CHILDHOOD INTERVENTIONS AND DEVELOPMENTAL THEORIES

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Linz 2025

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OVERVIEW

Part I: Bacher

- History, Aim and Definition of the NEET-Concept
- Measurement and NEET-Rates in Europe
- NEETs in Austria and Mental Health
- Interim Conclusion

NEET = neither employed
nor involved in education or training

COFFEE BREAK 

Part II: Fellinger

- Institute of Sensory Neurology and Language Neurology
- Developmental Theories
- Conclusion

Part III: Discussion

PART I

NEET-YOUTH IN AUSTRIA
WITH A SPECIAL FOCUS ON MENTAL HEALTH PROBLEMS

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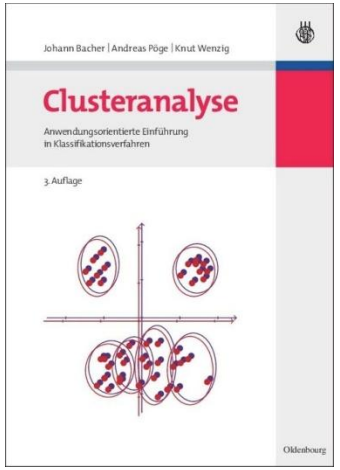
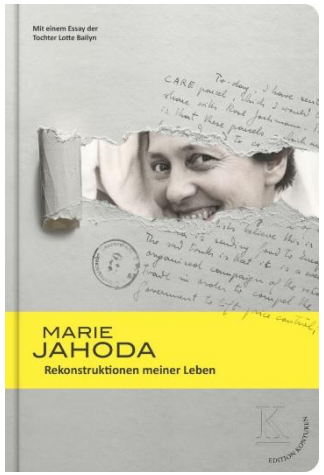




1. HISTORY, AIM AND DEFINITION

Origin of NEET-Concept

- Mid-1980s, Great Britain: marginalized youth, non-registered → Category “0” (ZERO)
- Mid-1990s, Great Britain: Term “0” is stigmatizing → NEET (Shortcut for neither in employment nor in education or training)

Spread

- Since 2000: (global) spread
- 2008: OECD → social indicator
- 2010: EU → new official indicator
- 2010/11: Austria (see below)

Hikikomori — Die Presse, 16.3.2025

Freiwillig in die Selbstisolation – und wieder zurück

In Japan gibt es immer mehr Jugendliche, die die Schule verweigern. Oft ist es der Beginn eines vollständigen Rückzugs aus der Gesellschaft, angetrieben durch Rebellion oder Verzweiflung.

Hikikomori (Japanese: ひきこもり or 引
known as **severe social withdrawal**,[1][
extreme degrees of social isolation and

Source:
https://en.wikipedia.org/wiki/Hikikomori

A young Japanese man living as a *hikikomori* in 2004

2. MEASUREMENT AND NEET-RATES IN EUROPE

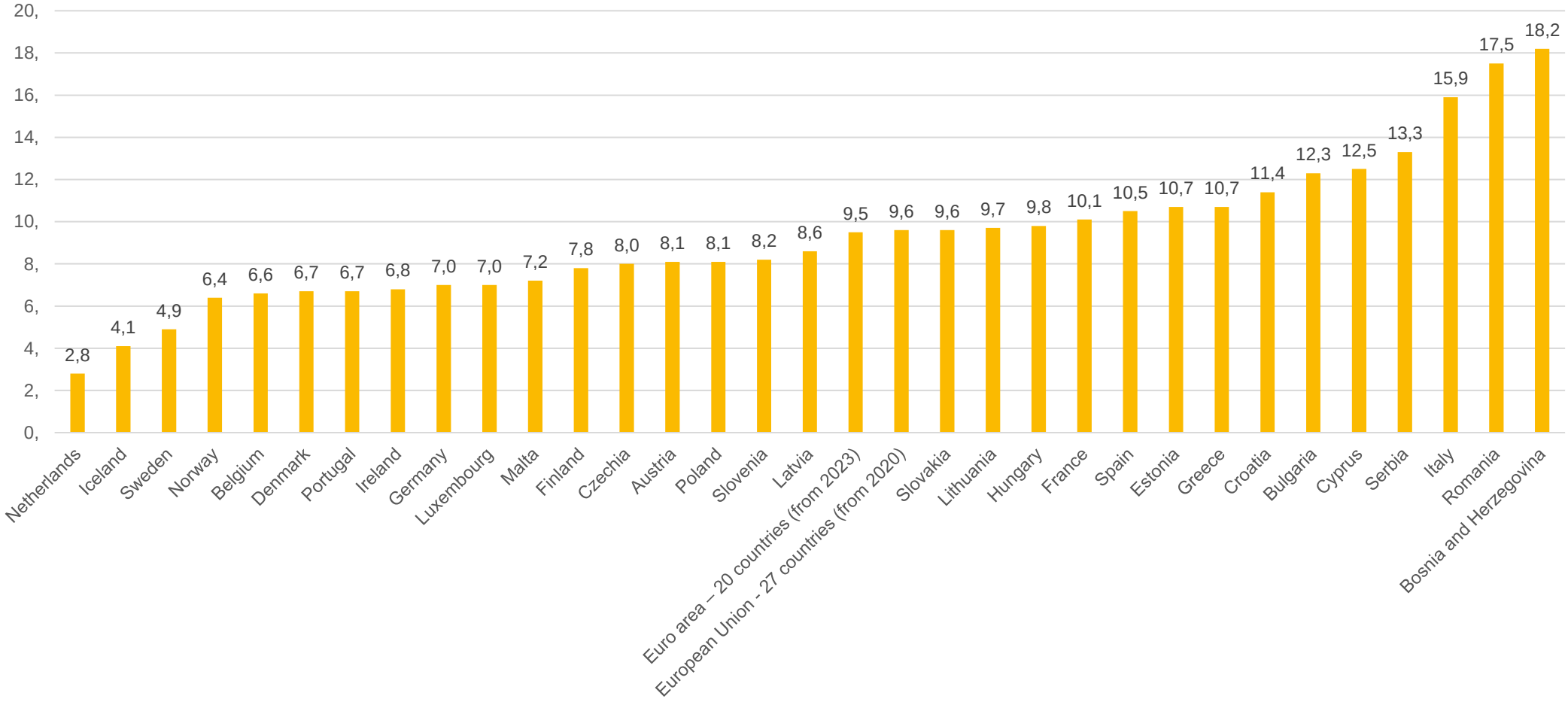
Measurement

- Data: ILFS (International Labor Force Survey)
- Age-Group: 15-24, 15-29 and 15-34, young people in civilian or military service are excluded
- Not employed → unemployed **or inactive according** to the International Labor Organization definition (employed = working in the reference week for one hour and more)
- not involved in education or training → formal or non-formal education or training in the four weeks preceding the survey
- Reports on percentages, not on absolute numbers

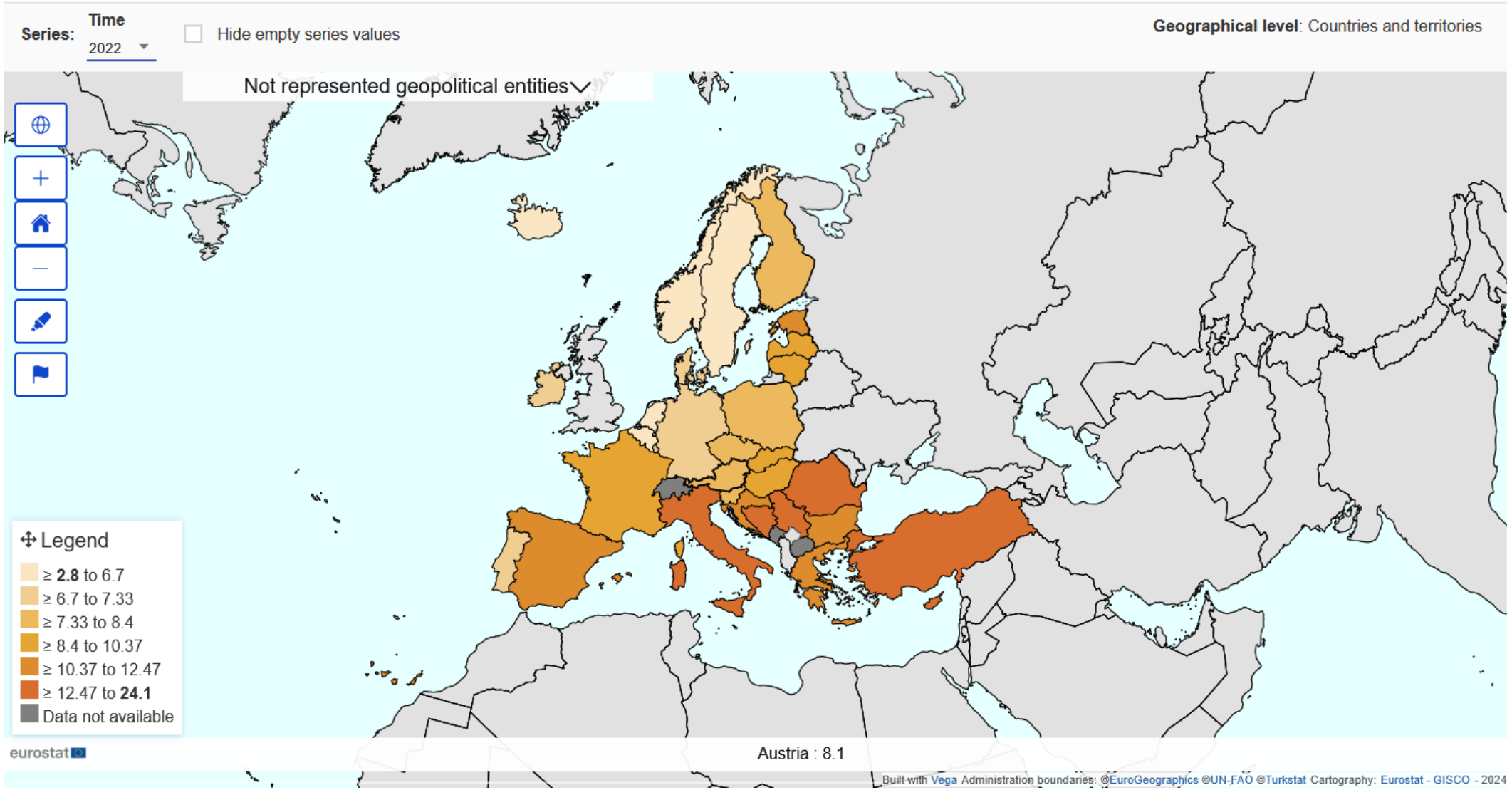
NEET-indicator partially covers the social problem of social exclusion

- **Advantages**
  - Includes young people at risk of exclusion who are not unemployed or registered as unemployed
- **Disadvantages**
  - Includes young people not at risk of exclusion (e.g. school leavers waiting to go to university; young mothers with an academic degree, ...)
  - Does not include all young people at risk of exclusion (e.g. “working poor”, homeless young people)
  - Stigmatization, in German: NEET→”Niete”, Ticket in a lottery that does not yield a win, “lahme Ente” (lame duck)

NEET-Rates, 15- to 24-Year-Olds, 2022



Source: Young people neither in employment nor in education and training by sex, age and country of birth (NEET rates) [edat_lfse_28__custom_15363938]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Data not available
eurostat
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3. NEETs IN AUSTRIA

Austria → NEET-concept unknown until 2010/11 → Bacher / Tamesberger (2011)

- Large public and political interest
  - Absolute number, general interest of politics and public in youth, social exclusion
- 1st NEET-Study (2011-2013, Bacher et al. 2014)
  - Mixed-Method-Design: quantitative secondary-analysis of ILFS (approx. n=75,000 young people in the age of 15 to 24 years, 2006-2011) + qualitative interviews with NEET-youths (n=60 qualitative interviews) + workshop on results with experts (approx. n=40 experts)
  - Number and socio-demographic characteristics, duration and reasons of NEET-status, measures
- 2nd NEET-Study (2015-2016, Bacher et al. 2016)
  - Health status of young people and NEETs and overview about psycho-social services in Upper Austria
  - Mixed-Method-Design: literature review (65 sources) + quantitative secondary-analysis (ILFS additional module approx. n=3,200 young people in the age of 15 to 24 years) + analysis of register/administrative-data (approx. n=100,000 young people in the age of 15 to 24 years) + qualitative secondary analysis of interviews with NEET-youths (n=24) + qualitative interviews with experts (n=12)
- Further studies and papers on ESL, NEET, youth unemployment etc.
- Two indicators: EU-Indicator plus national indicator (based on register/administrative-data)

NEETs IN AUSTRIA IN 2023

15- to 24-year-olds	Austria	Upper Austria	Vienna
Total	930,400	158,100	220,800
…in civilian or military service	22,100	3,200	3,600
Total without civilian or military service	908,300	154,900	217,200
in NEET	78,900 (8.7%)	11,800 (7.6%)	26,800 (12.3%)
…active NEET	33,900 (43.0%)	5,000 (42.4%)	12,500 (46.6%)
…inactive NEET	45,000 (57.0%)	6,800 (57.6%)	14,300 (53.4%)

Source: MZ2023, calculation by the author

HETEROGENEITY OF NEETs (15- TO 24-YEARS-OLDS)

Cluster	in %
unemployed early school leavers	21
apprenticeship graduates in rural areas	20
older unemployed young people	18
young mothers with a migration background	15
school graduates in waiting position	10
young people with illnesses	9
young mothers without a migration background	7

Source: Bacher et al. (2014)

4. NEET-STATUS AND MENTAL HEALTH

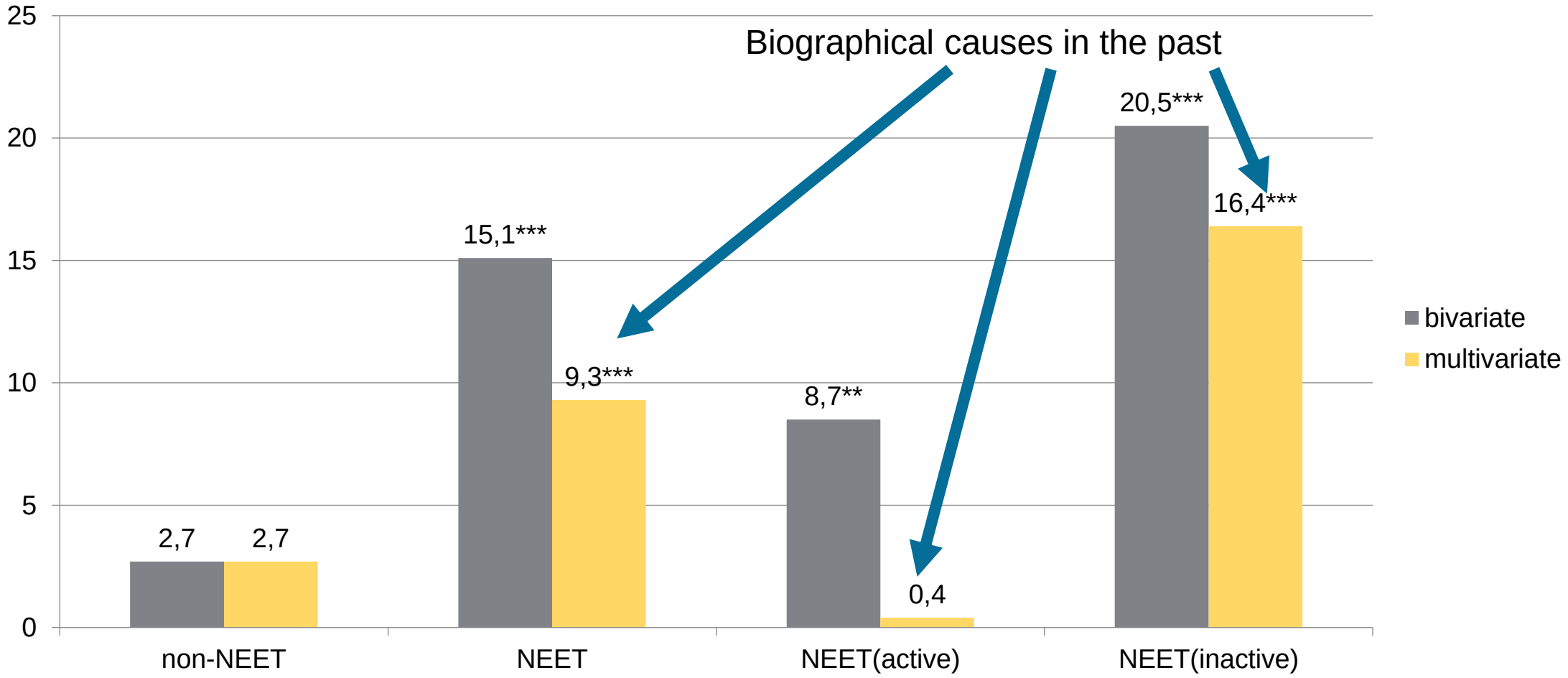
Long-term impairments/illnesses

Mental / Psychological impairments	Physical impairments
– **Learning disabilities**	– Problems with arms, hands
– **Anxiety disorders**	– Problems with legs, feet
– **Depression**	– Problems with back, neck
– **Other mental health problems**	– Skin diseases
– **Other long-term health problems**	– Problems with heart, blood pressure, circulation
	– Problems with chest, breathing
	– Problems with stomach, liver, kidneys, digestion
	– Diabetes
	– Cancer
	– Epilepsy
	– Severe headaches
	– other progressive diseases

Source: Bacher et al. (2016, 2022)

Definition: Long-term impairments/illnesses are those that last or are expected to last for at least six months.

PERMANENT PSYCHOLOGICAL IMPAIRMENTS OF 15- TO 24-YEAR-OLDS



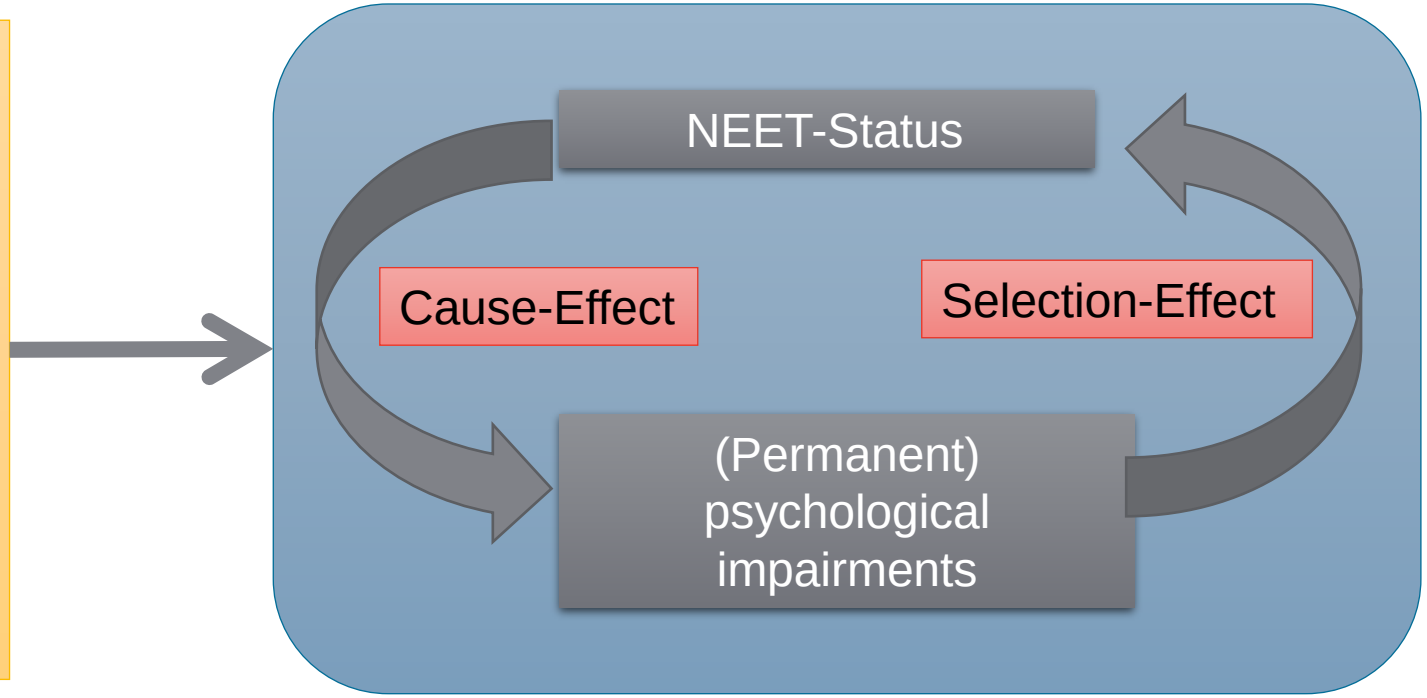
Source: Bacher et al. (2016: 143)

CAUSAL MODEL

Biographical causes in the past

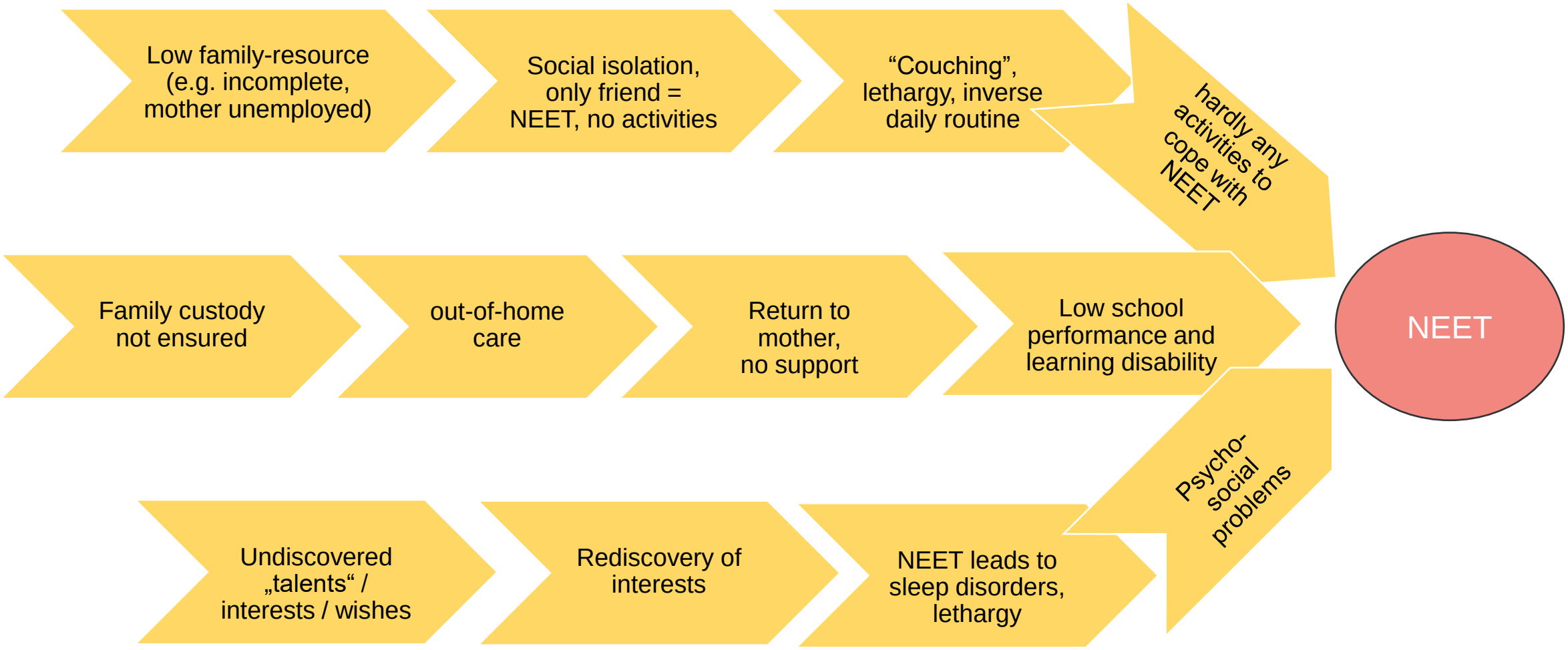
Accumulation of risk factors with limited resources and late intervention

Risk factors in
- family
- school
- peers



Causal model is confirmed by qualitative interviews and administrative data
- **Qualitative data**: Accumulation of risk factors and low resources (protective factors), biographically early occurrence of risk factors, late interventions
- **Administrative data:** Early onset, interplay between unemployment and psychological impairments

CASE-STUDY EVA, 16 YEARS OLD

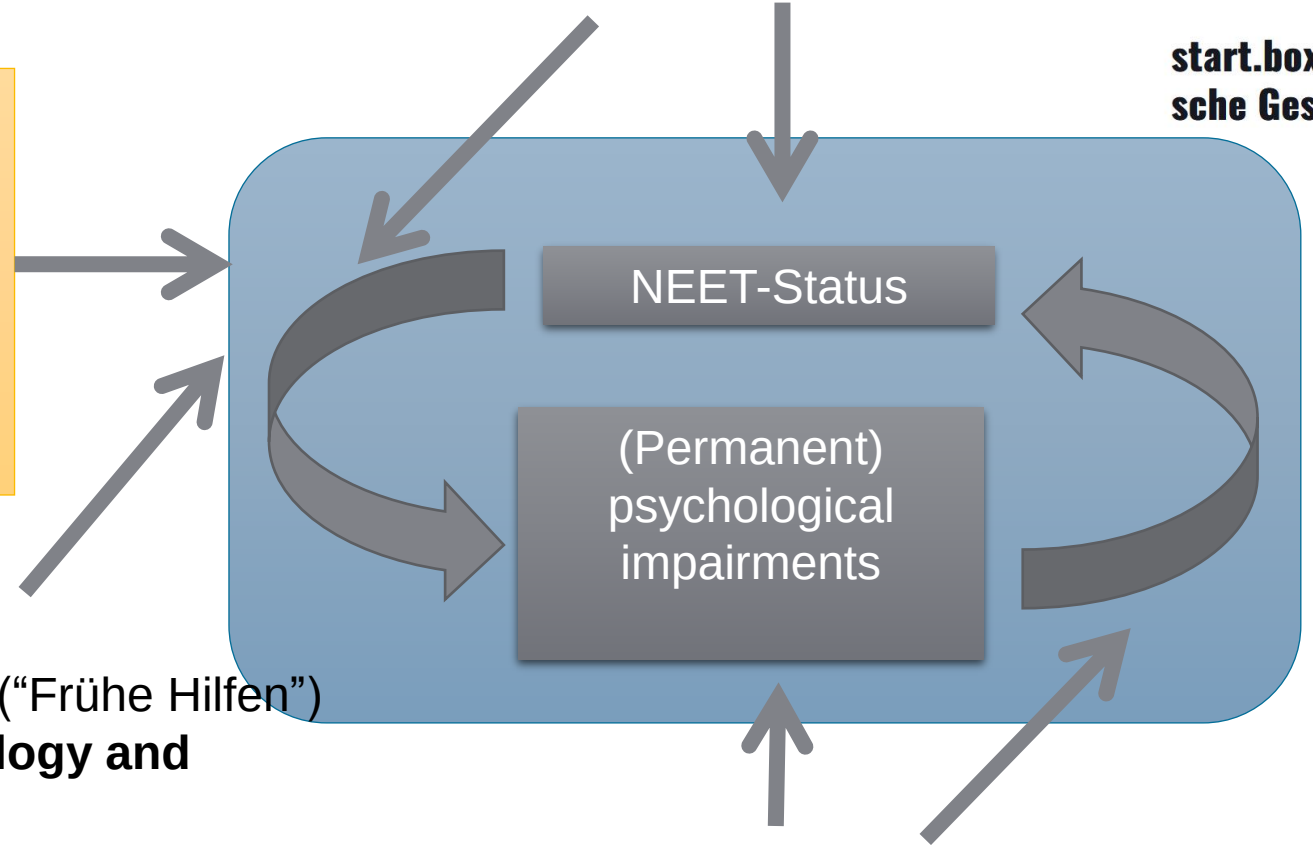


MEASURES

Measures
- Employment/training/staying in the system
- Psychosocial support in NEET status

Biographical causes in the past causes

Accumulation of risk factors with limited resources and late intervention



Cooperation of the different support systems

Interventions, e.g.
- Early childhood intervention (“Frühe Hilfen”)
- **Institute of Sensory Neurology and Language Neurology**
- Avoidance of ESL
- etc.

Measures
Treatment / care / support
Reduction of selection risk

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5. INTERIM CONCLUSION

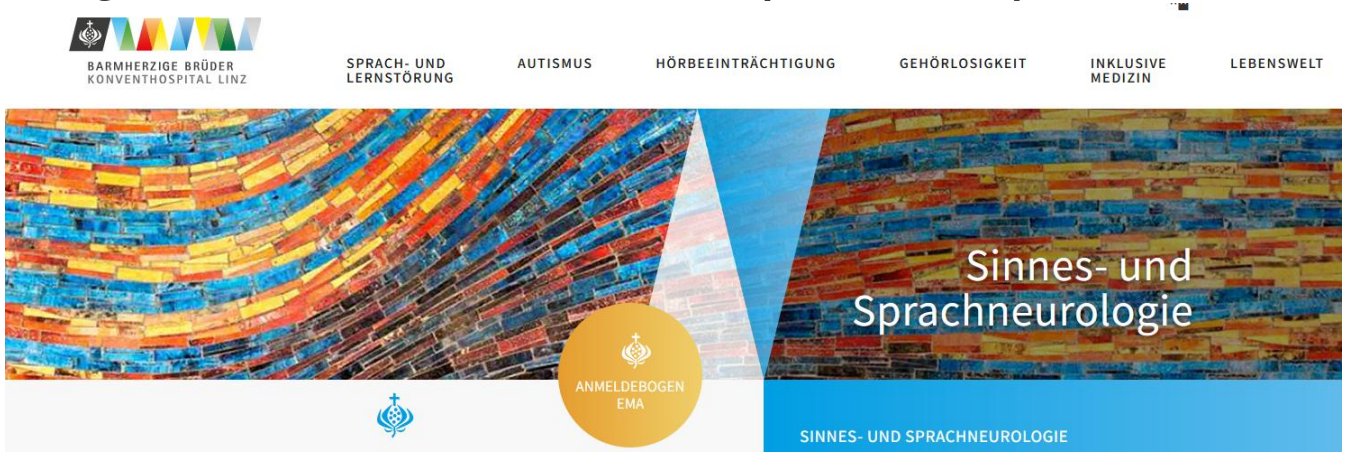
- **NEETs** are a **heterogenous group**.
- **NEETs** with **permanent psychological impairments** are **one subgroup.**
- **Causes** for this subgroup are very often rooted in early childhood,
  - but NEET-status strengthens mental health problems and vice versa
  - psychological impairments make it more difficult to leave NEET-status
- **Support-Structure** and Interventions for young people
  - Austria has good approaches, both at the legal level and at the level of implementation
  - But there is still a lot to do.
- **Major challenges**
  - Demand greater than supply → financial resources and personnel/staff
  - "Age-Boarders" → more flexible (e.g. switching from adolescent psychiatry to adult psychiatry at the age of 18)
  - Sustainability → institutionalize "projects" to avoid loss of know-how, demotivation of project manager and organization
  - Aftercare (exit of NEET-status and handling with mental health problems should be sustainable)
  - Cooperation between the systems → at the operational and strategic levels
  - Participation of young people

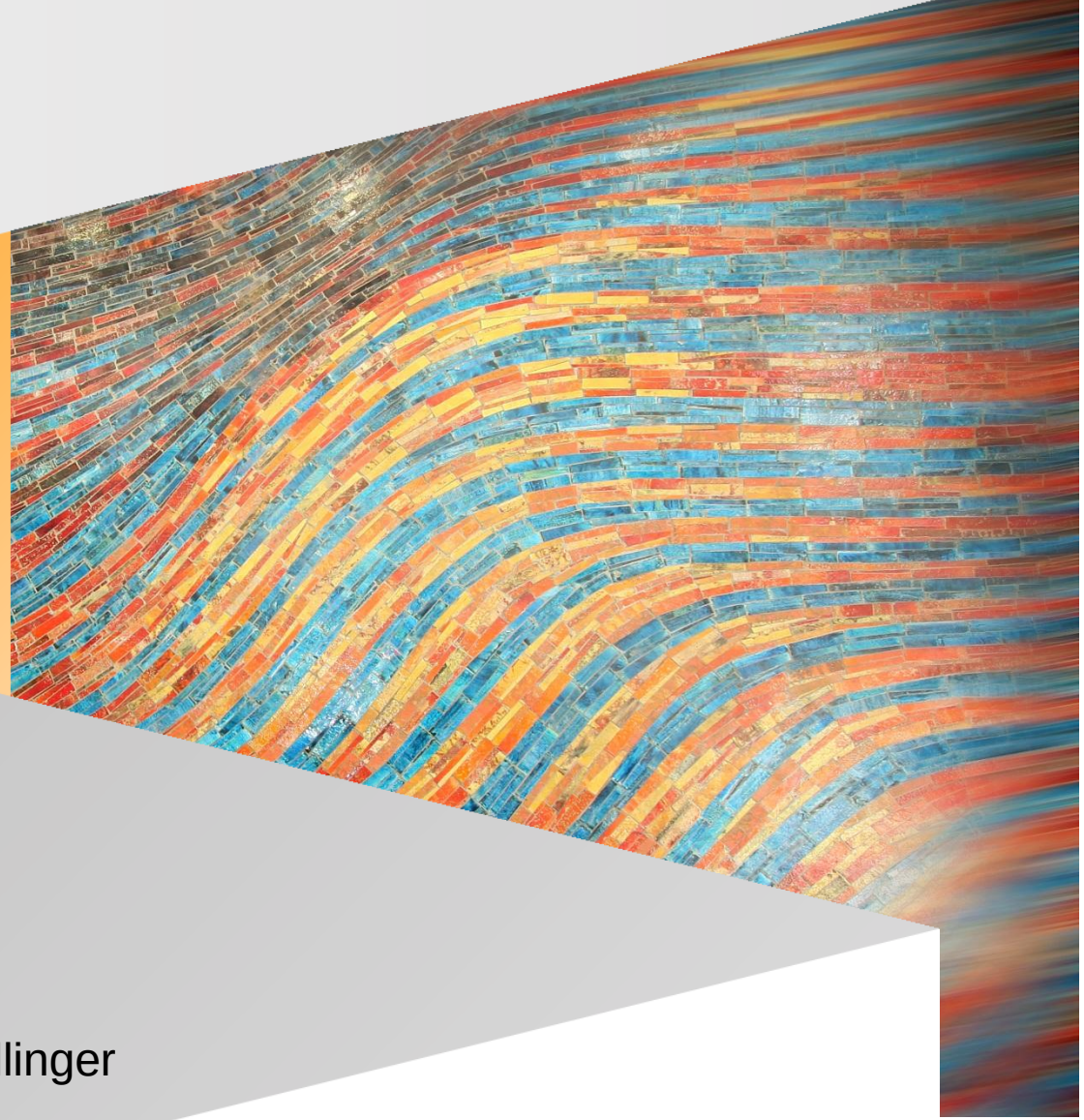
PART II

DEVELOPMENTAL DISORDERS AND MENTAL HEALTH

EARLY CHILDHOOD INTERVENTIONS AND DEVELOPMENTAL THEORIES

Prim. MR Priv.-Doz. Dr. Johannes Fellinger (Forschungsinstitut für Entwicklungsmedizin der JKU Linz and before Institut für Sinnes- und Sprachneurologie der Barmherzigen Brüder Konventhospital Linz)





INSTITUTE FOR NEUROLOGY OF SENSES AND LANGUAGE

MR Prim. Em. Prof. Dr. Johannes Fellinger

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HOSPITAL ST. JOHN OF GOD

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GOALS

- The goal of the Institute for Neurology of Senses and Language is to provide support diagnostically and therapeutically to deaf and hard of hearing people or people with impediments in the area of sensory perception, language and learning.

GOAL

- The aim moreover is to help affected families in a competent and holistic manner and to improve the quality of life for all involved. Services are being optimised through a well-developed network with self-help organisations and other service providers. Accompanying scientific research ensures quality of service.

TARGET GROUPS

- Deaf and hard of hearing people
- Children and adults with speech, communication and learning disabilities
- Children and adults with autism spectrum disorders

HEAD OF THE INSTITUTE

Johannes Hofer, MD

HOSPITAL ST. JOHN OF GOD
INSTITUTE FOR NEUROLOGY OF SENSES AND LANGUAGE
Johannes Fellinger, MD PD

DEVELOPMENT of | **SUPPORT OF** | **ACCESS** to

PEOPLE with hearing, communication, language and learning disorders			**HEALTH** of deaf people and people with hearing impairment as well as people with multiple disabilities		**COMMUNITY LIFE** for deaf people with multiple disabilities		**Research Institute for Developmental Medicine at the Johannes Kepler University Linz**
Multidisciplinary diagnostics	**Intervention programs**		**Barrier free social medicine**		**Therapeutic community Barrier free qualification**		
Developmental medicine outpatient clinic	**Intervention for DHH children and their families**	FLIP Family centred early intervention	**Health Centre for the Deaf**	General medicine Social and family counselling Psychology Day Centre for deaf seniors Workshop - structured work day Work assistance Training of communicative skills for workplace	**Lebenswelt Schenkenfelden + Pinsdorf + Wallsee**	Supported living	
		Therapy for children with hearing impairment at school					
	Autism competence centre	Early intervention Autism spectrum disorder				Supported work Workshop Linz	
		Work_aut Preparation for vocational life for people with ASS					
	Therapeutic centre for children with severe language disorders			Outpatient clinic for inclusive medicine		Vis.com 3-years training program	

Predominantly children | **Predominantly adults**

DEVELOPMENTAL MEDICINE AMBULANCE

- For children and adults with speech, communication and learning disabilities
- Multidisciplinary developmental diagnoses
- Intervention program for children with severe speech and communication problems

FAMILY CENTRED EARLY INTERVENTION PROGRAMM (FLIP)

- for families with children with hearing impairments
- Family based intervention at home
- Information about the development of hearing, language and speech, alternative communication and technical support

THERAPY FOR CHILDREN WITH HEARING IMPAIRMENTS

- for children in Kindergarden and school
- Psychology, occupational therapy, speech therapy

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COMPETENCE CENTRE FOR AUTISM

- Early intervention for children with autism spectrum disorder (Early Start Denver Model)
- Therapy for pupils and adolescents with severe communication and language disorders
- WORK_aut: preparation for vocational life for people with autism spectrum disorder

HEALTH CENTRE FOR THE DEAF

- Direct access to signing professionals in general, mental and social health
- For Deaf and hard of hearing people
- All staff members (doctors, psychologist, nurse, social workers, sign language interpreter, secretaries,…) are trained in deaf awareness and Austrian Sign Language.
- Longer consultation time is provided for Deaf people.

PATIENT´S RIGHT

- The patient is the only one who can/should decide what he wants. But for this decision understandable information has to be given to him.

MEDICINE

- General medical care (acute and for in-patients)
- Patients are accompanied to other hospital departments for exeminations
- Preventive medicine, health education
- Neuropsychiatry

SPECIFIC HEALTH PROGRAMS

- Individual preventive health care
- Routine full medical check up
- special medical rehabilitation and recreation program
- Courses for Deaf parents
- Training courses (stress, spinal column,…)
- Health education („Health days for the Deaf“,…)

SOCIAL CARE

- Social counselling and social educational support for families with deaf family members
- Psychological support
- Job coaching
- Communication training



DAYSTRUCTURE

- Therapeutic workplace
- Centre for deaf seniors

OUR PRIORITY: DIRECT COMMUNICATION WITH THE DEAF PATIENT

1:1 communication means for us

- more information (for patient and doctor)
- reduction of anxiety
- mutual trust
- better adaptation to the patients standard of knowledge
- better understanding of Deaf Culture

OUT-PATIENT CLINICS FOR THE DEAF IN AUSTRIA: WIEN, SALZBURG, GRAZ (STYRIA) AND LINZ (UPPER AUSTRIA)

PRACTICAL IMPLICATIONS

- Make information visible
- Have a key person responsible for organizing interpreters and support for the Deaf
- Continuous awareness program on deafness and hearing impairments for all employees of the hospital
- It is impossilbe making/keeping all hospitals deaf-aware
- rather give the Deaf a safe „harbour“ in one hospital
- reach out from there to specialized units in other hospitals

OUTPATIENT CLINIC FOR INCLUSIVE MEDICINE

- The Outpatient Clinic for Inclusive Medicine offers barrier-free access to all of our medical services, providing interdisciplinary, multi-professional assessment, therapy, advice and support.
- Time is taken to provide patients with holistic and comprehensive care. In order to meet the needs of people with disabilities, we offer barrier-free access and avoid waiting times.
- The services are aimed at adults (aged 18 and over) with intellectual developmental disorders and/or complex multiple impairments.

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LEBENSWELT

- Community life for deaf people with multiple disabilities
- Working and residential service
- Specialisation on the specific communication needs
- Signing staff

LEBENSWELT LOCATIONS

Schenkenfelden: since 1999

32 participants in 5 workplaces
25 participants in the residential service

Pinsdorf: since 2011

22 participants in the workplaces

13 participants in the residential service

Wallsee: since 2014

15 participants in the workplaces

14 participants in the residential service

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VIS.COM

- Two or three years training for social care professions in sign language for deaf and hard of hearing students
- Official recognized as school since 2004

RESEARCH INSTITUTE FOR DEVELOPMENTAL MEDICINE

- The RID is a Research Institute of the JKU Medical Faculty established in cooperation with the Institute for Neurology of Senses and Language of the St. John of God Hospital.

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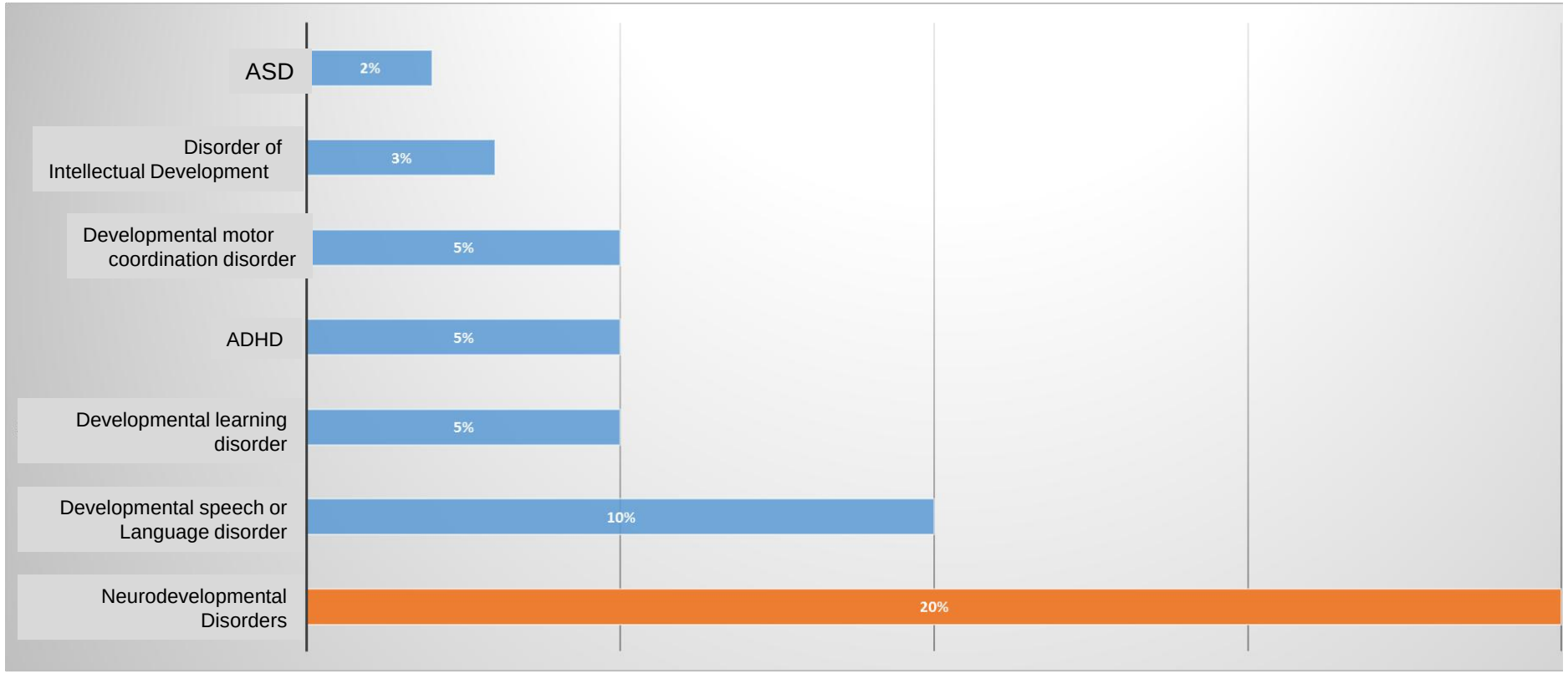
RESEARCH INSTITUTE FOR DEVELOPMENTAL MEDICINE

RID mission statement

- The Research Institute for Developmental Medicine (RID) is concerned with people with developmental disorders, and those with sensory impairments which have a major effect on communication. It will conduct research into the epidemiology, etiology, and developmental course over the life span of these disorders, and include both early identification of these disorders, and interventions which also address the social environment.



- Francés L et al. Prevalence, comorbidities, and profiles of neurodevelopmental disorders according to the DSM-5-TR in children aged 6 years old in a European region. Front Psychiatry. 2023 10;14:1260747
- Maenner MJ et al. Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years - Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020. MMWR Surveill Summ. 2023 Mar 24;72(2):1-14
- Francés L et al. Current state of knowledge on the prevalence of neurodevelopmental disorders in childhood according to the DSM-5: a systematic review in accordance with the PRISMA criteria. *Child Adolesc Psychiatry Ment Health* 2022 16, 27

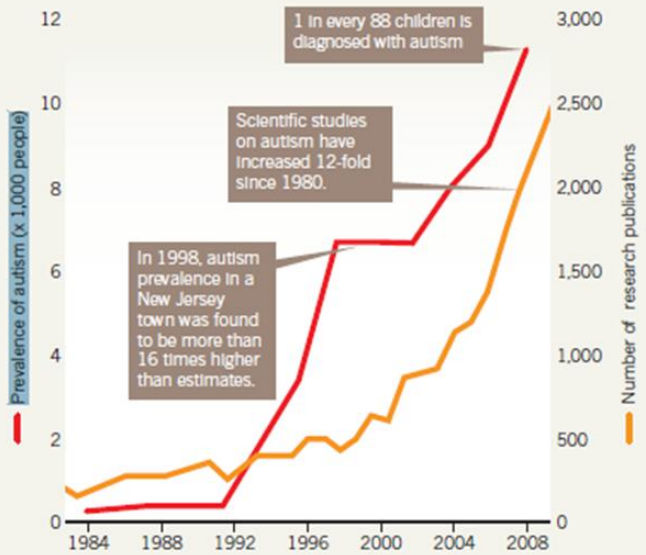
Autism Spectrum Disorder

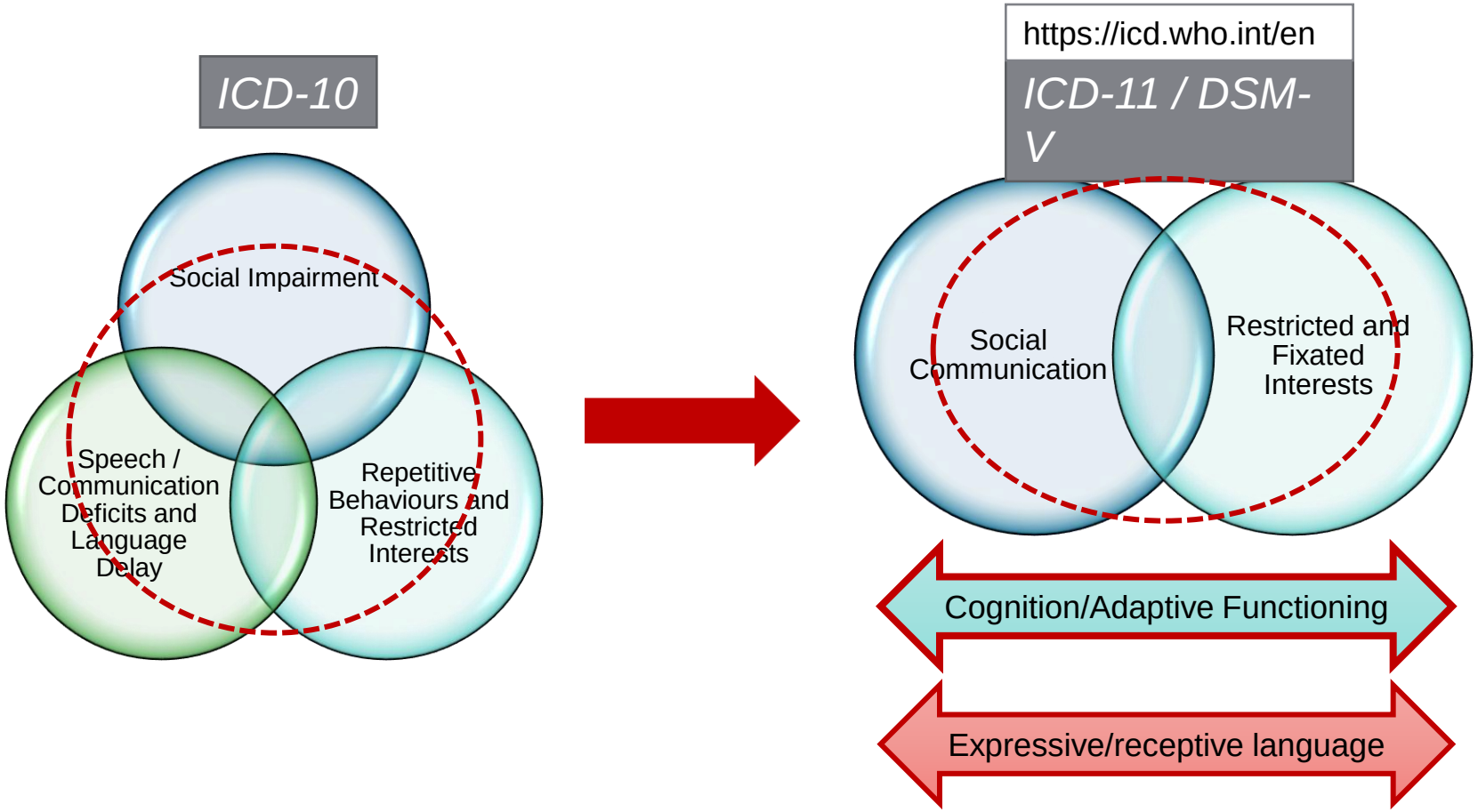
- CDC (Center for Disease Control USA 2021) - 1 out of 44 Children (>2%)
- SciRep (Li et al 2023): USA: 2.94%
- „At least 78 million people worldwide have autism“ (The Lancet 2022)
- Autism affects all Nations, Religions, Races, Sexes etc.
- 1 out of 27 boys and 1 out of 116 girls (CDC 2018) 1:4

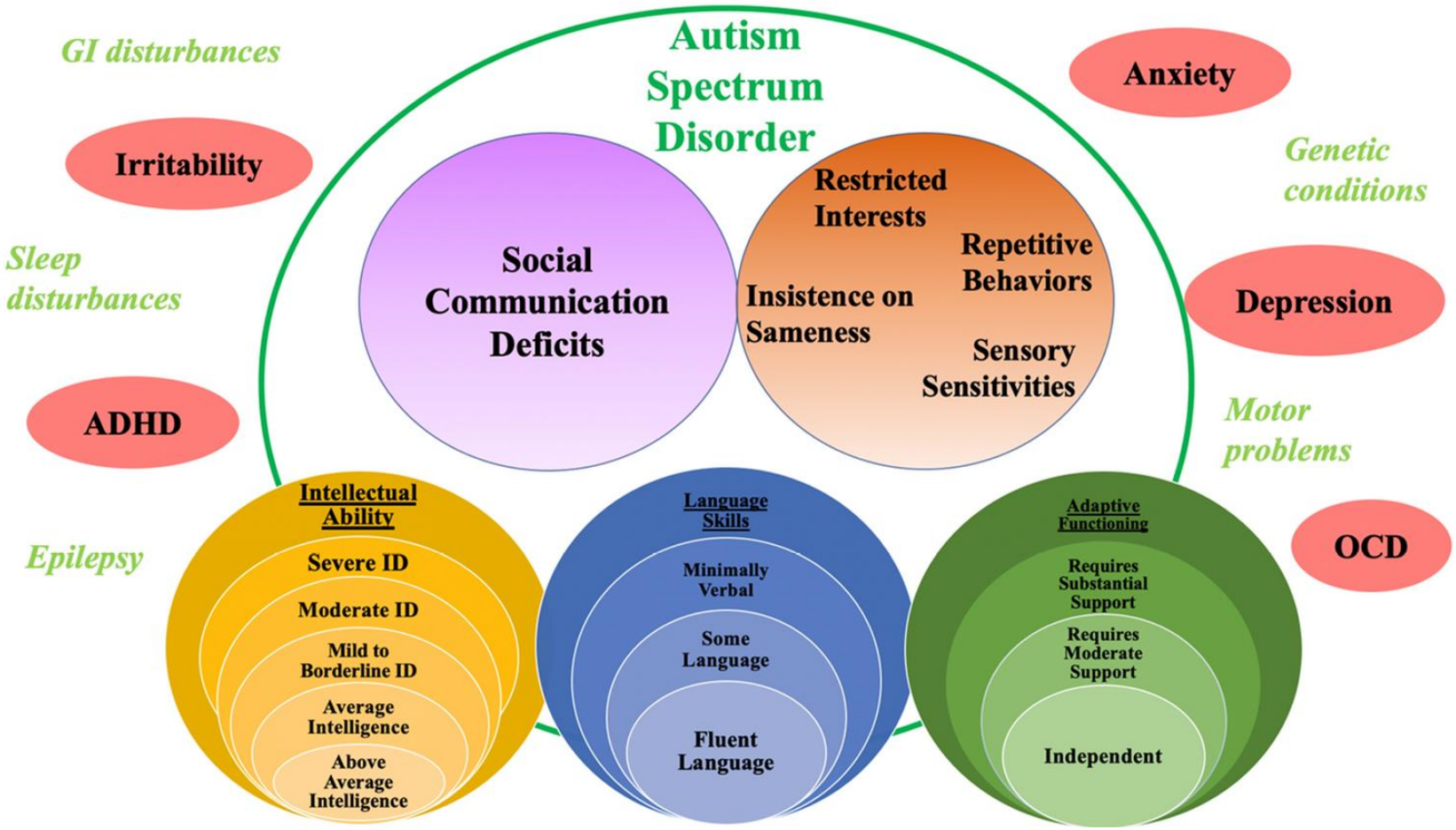
THE RISE OF AUTISM

Once thought of as a rare disease, autism's prevalence, funding and research has risen dramatically over the past twenty years.

PREVALENCE OF AUTISM AND RELATED RESEARCH




ICD-10
Social Impairment
Speech / Communication Deficits and Language Delay
Repetitive Behaviours and Restricted Interests
https://icd.who.int/en
ICD-11 / DSM-V
Social Communication
Restricted and Fixated Interests
Cognition/Adaptive Functioning
Expressive/receptive language



Rosen et al., JADD 2021

	Typical age of onset	Prevalence in individuals with ASD (data from population-based studies and epidemiological surveys)*	Prevalence in individuals with ASD (data from clinical populations)*	More frequent in individuals with ID than in individuals with no ID?*	Effective evidence-based treatment for individuals with ASD†	Effective evidence-based treatment for individuals without ASD†
Intellectual disability	NA	Highly variable within and between global regions;[290] 30–70% in HICs (studies since 2000); rates might be higher in studies limited to children younger than 5 years and in LMICs	Systematic review, no aggregated data	NA	Treatment can improve IQ but seldom results in moving out of ID	No
Speech and language problems or delay	NA	Few population-based studies; 56% in 10–14 year-olds[291]	Systematic review, no aggregated data	Yes	Yes	Yes
Motor problems	NA	No population-based studies on motor development or coordination problems; 30·3% (95% CI 22·7–37·9%) on the basis of the Child and Adolescent Twin Study in Sweden[292] (not direct examination)	Systematic review, no aggregated data	Yes	No	Yes
Urinary incontinence only	NA	2–11% in children aged 5–16 years[293]	16–30% in children aged 5–17 years[293]	Yes	No	Yes
Combined urinary and faecal incontinence	NA	Daytime urinary incontinence in 4–22% of children up to 18 years; faecal incontinence in 2–7% of children aged 5–14 years	Daytime urinary incontinence in 25% of children aged 5–16 years; faecal incontinence in 12–29% of children aged 5–16 years[293]	Yes	No	Yes
Constipation	Childhood	Population-based and clinical ASD samples combined: 4–46% (median 22%)[294]		Unknown	No	Yes
Diarrhoea	Childhood	Population-based and clinical ASD samples combined: 2–76% (median 13%)[294]		Unknown	No	Yes
Overweight and obesity	Childhood and adolescence	No population-based studies	BMI ≥85th percentile: 37·0% (95% CI 33·5–40·5); BMI >95th percentile: 22·2% (18·1–26·9)[295]	Unknown	Yes	Yes
Selective eating	Childhood	No population-based studies	No aggregated prevalence data available[296]	Unknown	No	No
Anorexia	Adolescence	Lifetime prevalence: HR 5·3 (95% CI 4·4–6·6)[297]	Lifetime prevalence: 2–7% (95% CI 1–8%)[298,299]	No	No	Yes
Sleep–wake disorders	Childhood	Pooled prevalence: 11% (95% CI 7–17%)[16]	Pooled prevalence: 13% (95% CI 16 9–17%)	Unknown	Yes	Yes
Attention-deficit hyperactivity disorder	Childhood	Pooled prevalence: 22% (95% CI 17–16 26%)	Pooled prevalence: 28% (95% CI 16 25–32%)	No	Yes	Yes
Anxious behaviour and anxiety disorders	Childhood	Pooled prevalence: 15% (95% CI 11–19%)[16,300]	Pooled prevalence: 20% (95% CI 17–23%)[16,300]	No	Yes	Yes
Obsessive-compulsive disorder	Adolescence	Pooled prevalence: 4% (95% CI 2–6%)[16]	Pooled prevalence: 9% (95% CI 7–10%)[16]	No	No	Yes

	Typical age of onset	Prevalence in individuals with ASD (data from population-based studies and epidemiological surveys)*	Prevalence in individuals with ASD (data from clinical populations)*	More frequent in individuals with ID than in individuals with no ID?*	Effective evidence-based treatment for individuals with ASD†	Effective evidence-based treatment for individuals without ASD†
Depressive disorder	Adolescence	Pooled prevalence: 8% (95% CI 5–11%)[16]	Pooled prevalence: 11% (95% CI 9–13%)[16]	No	Yes	Yes
Bipolar spectrum disorder	Adolescence and adulthood	Pooled prevalence: 3% (95% CI 2–5%)[16]	Pooled prevalence: 5% (95% CI 3–6%)[16]	No	No	Yes
Oppositional defiant disorder	Childhood	28% (95% CI 14–42%; data from one population-based study in children with ASD)[301]	..	No	Yes	Yes
Aggressive behaviour and conduct disorder	Childhood	Pooled prevalence: 7% (95% CI 4–11%)[16]	Pooled prevalence: 12% (95% CI 10–15%)[16]	No	Yes	Yes
Internet gaming disorder	Adolescence	No population-based studies	Systematic review, no aggregated data	Unknown	No	Yes
Schizophrenia spectrum	Adolescence and adulthood	Pooled prevalence: 2% (95% CI 1–4%)[16]	Pooled prevalence: 4% (95% CI 3–5%)[16]	No	No	Yes
Non-suicidal self-injury	Childhood, adolescence, and adulthood	27–50%	Pooled prevalence: 42% (95% CI 38–47%)[302]	Different types (including suicide attempts vs repetitive self-injuries)	For some types	No
Suicidality	Adolescence	Suicide 0·3%[303]	Suicidality in children, adolescents, and adults: 11–50%; suicide attempt: 7–15%[304,305]	Suicide decreased in ID	No	Yes
Gender dysphoria	Childhood and adolescence	6·5–40·0% with widely varying definitions and age groups; generally higher in adults[306]		Unknown	Yes	No
Gastro-oesophageal reflux	Unknown	Population-based and clinical ASD samples combined: 0–22% (median 7%)[292]		Unknown	No	Yes
Seizures and epilepsy	Childhood	Median 10·8% (95% CI 2·5–60·0%); 15·5% (0·0–60·0%) in girls; 8·8% (3·7–30·0%) in boys[307]	Lifetime prevalence: 1·8% (95% CI 0·4–9·4%) in children younger than 12 years with no ID; 8·9% (3·7–15·7%) in children older than 12 years with no ID; 6·1% (3·8–9·0%) in children younger than 12 years with ID; 23·7% (17·5–30·5%) in children older than 12 years with ID[47]	Yes	No	Yes
Genetic syndromes and specific genetic disorders	NA	Population-based and clinical ASD samples combined: 10–30% recognised genetic disorder or de novo mutation		Yes	No	No
Peripheral hearing loss	NA	5–7%	0–10% in children[308]	Unknown	No	Yes
Vision difficulties	Usually in childhood	2–12% blindness or sight loss	Myopia: 2–16%; hyperopia: 8–18%; astigmatism: 3–26%; anisometropia: 1–12% (in children and adolescents)[309]	Unknown	No	Yes
Cerebral palsy	NA	2·9–4·3%[310]	..	Yes	No	No

Lord, C., Charman, T., Havdahl, A., Carbone, P., Anagnostou, E., Boyd, B., ... & McCauley, J. B. (2022). The Lancet Commission on the future of care and clinical research in autism. *The Lancet*, *399*(10321), 271-334.

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JKU Forschungsinstitut für Entwicklungsmedizin

BARMHERZIGE BRÜDER KONVENTHOSPITAL LINZ

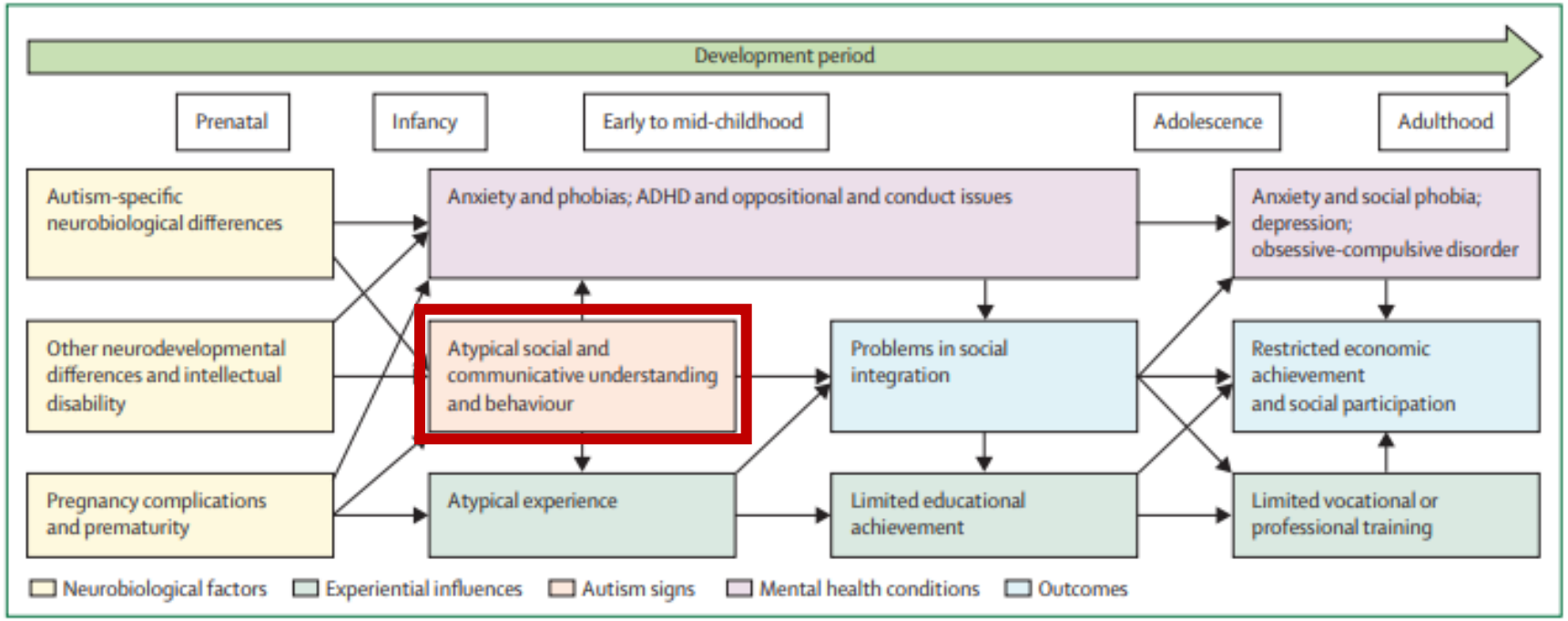
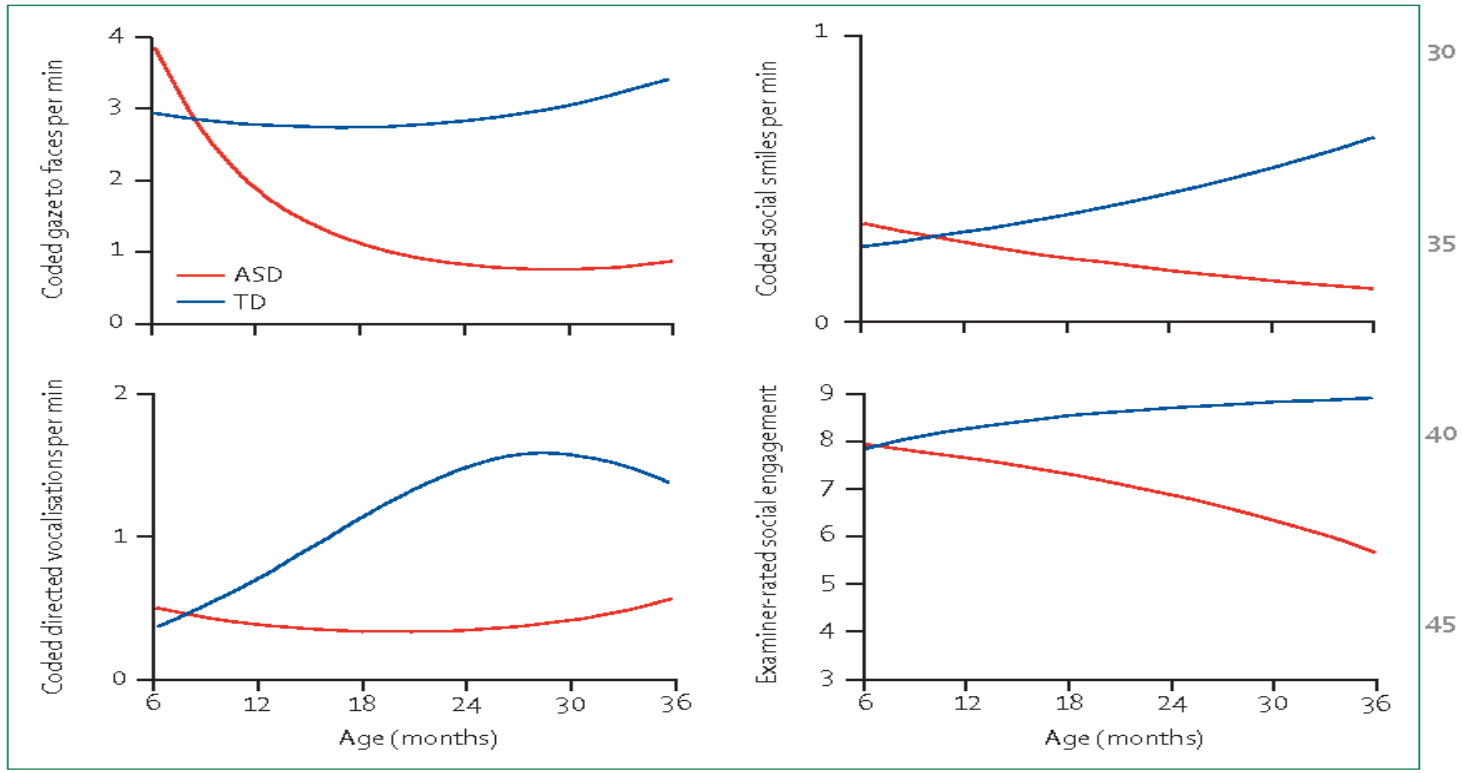


Figure 2: **Neurobiological and experiential influences on signs of autism, mental health, and life outcomes across development**
ADHD=attention-deficit hyperactivity disorder.

Lord et al., Lancet 2022

ASD EARLY SIGNS

(ELLIS WEISMER ET AL., 2010; GUTHRIE ET AL., 2013; LANDA ET AL., 2006; MESSINGER ET AL., 2013
MITCHELL ET AL., 2006; LORD ET AL., 2012; OZONOFF ET AL., 2011, 2014)



Constantino & Charman, The Lancet, 2016

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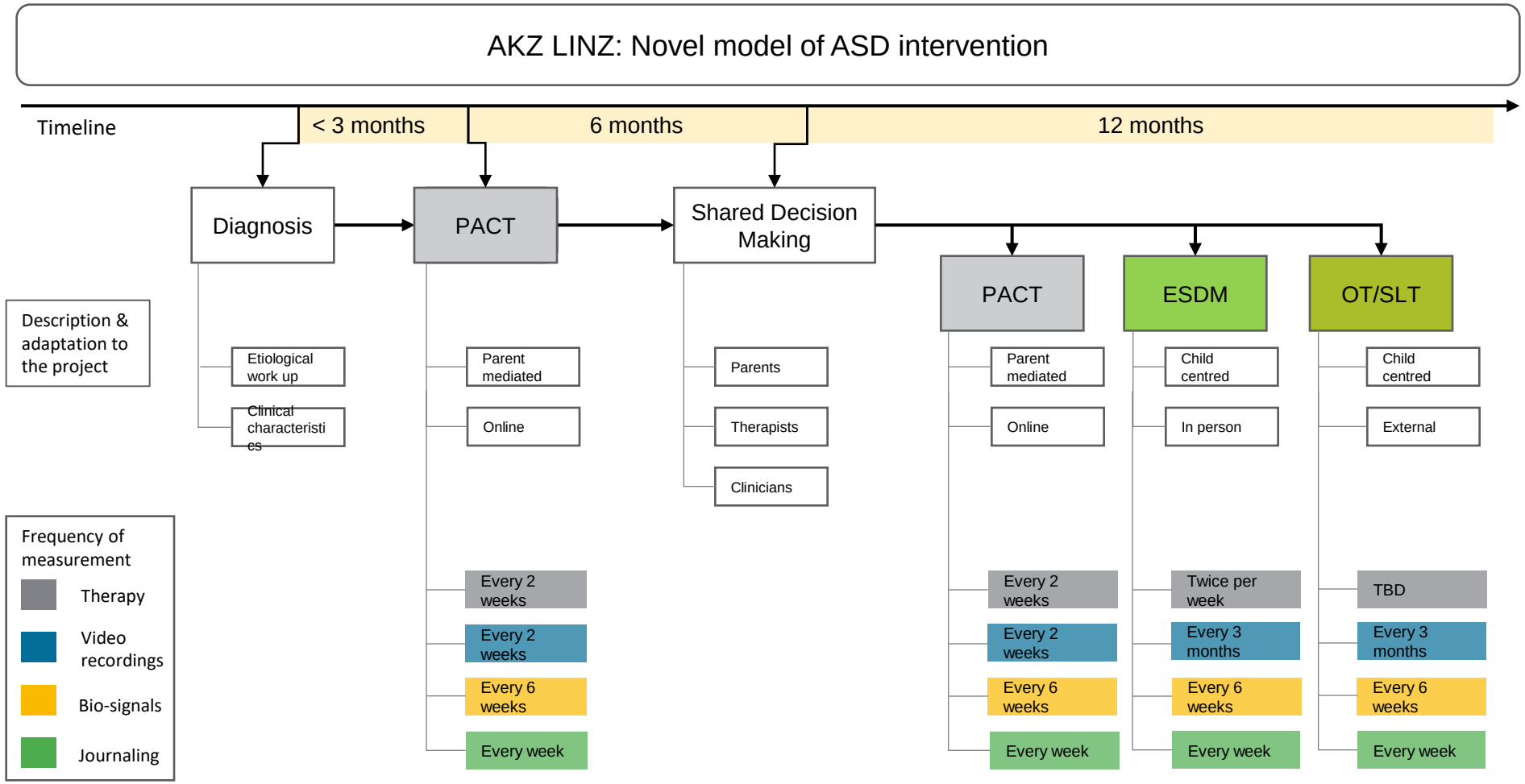
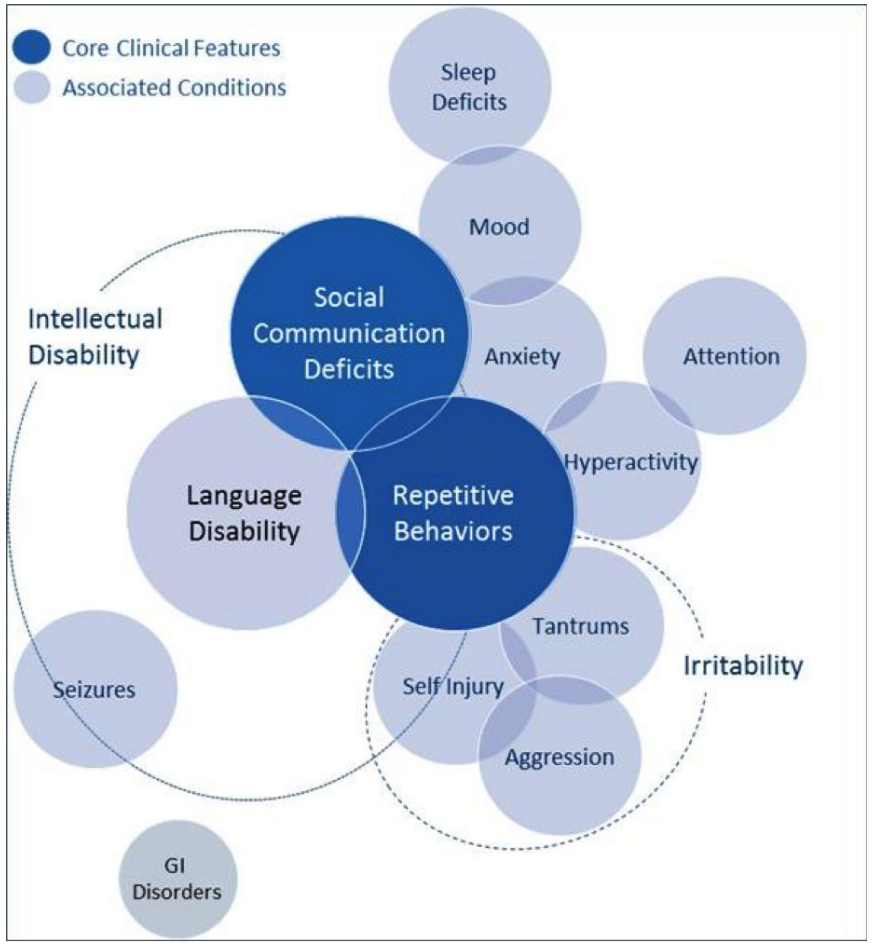
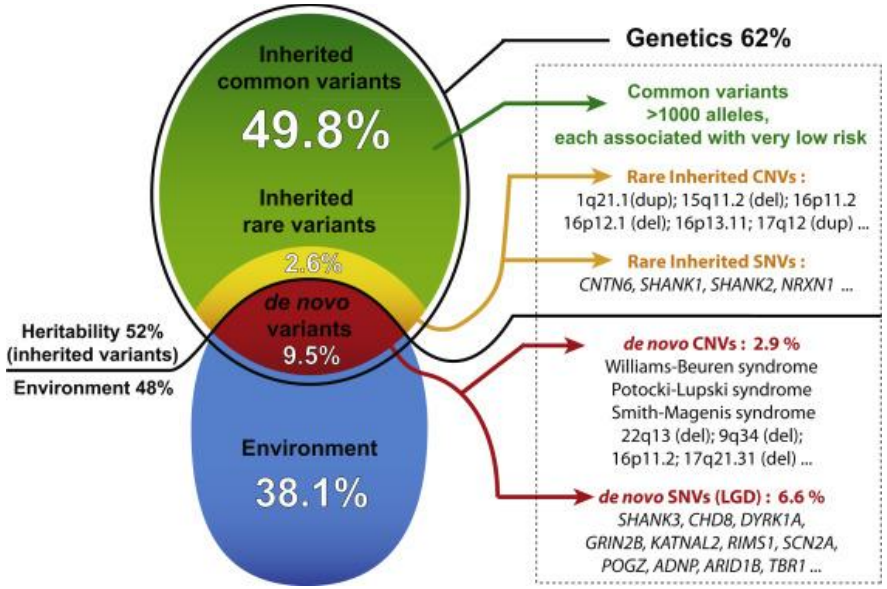


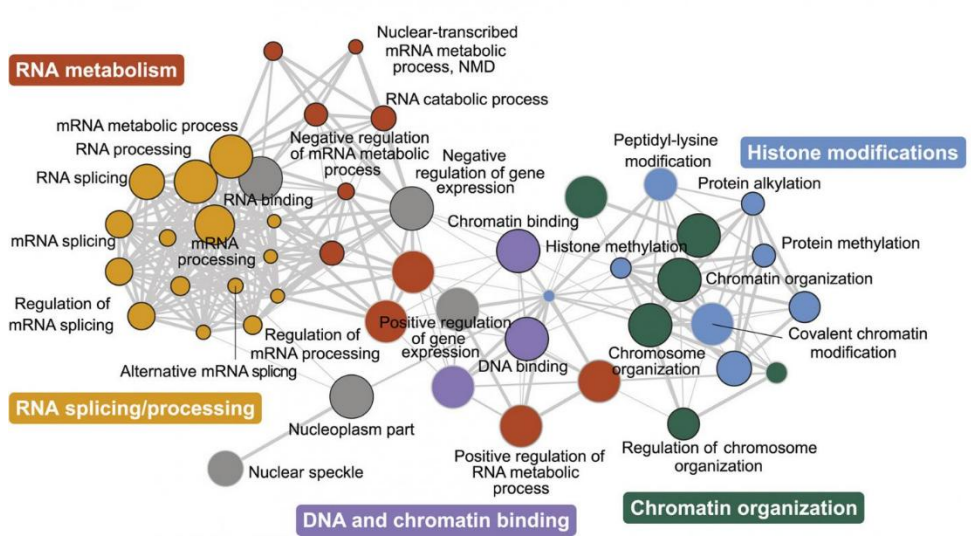
ASD = Autism Spectrum Disorder; ESDM = Early Start Denver Model ; OT = Occupational Therapy; PACT = Paediatric Autism Communication Therapy; SLT = Speech/Language Therapy



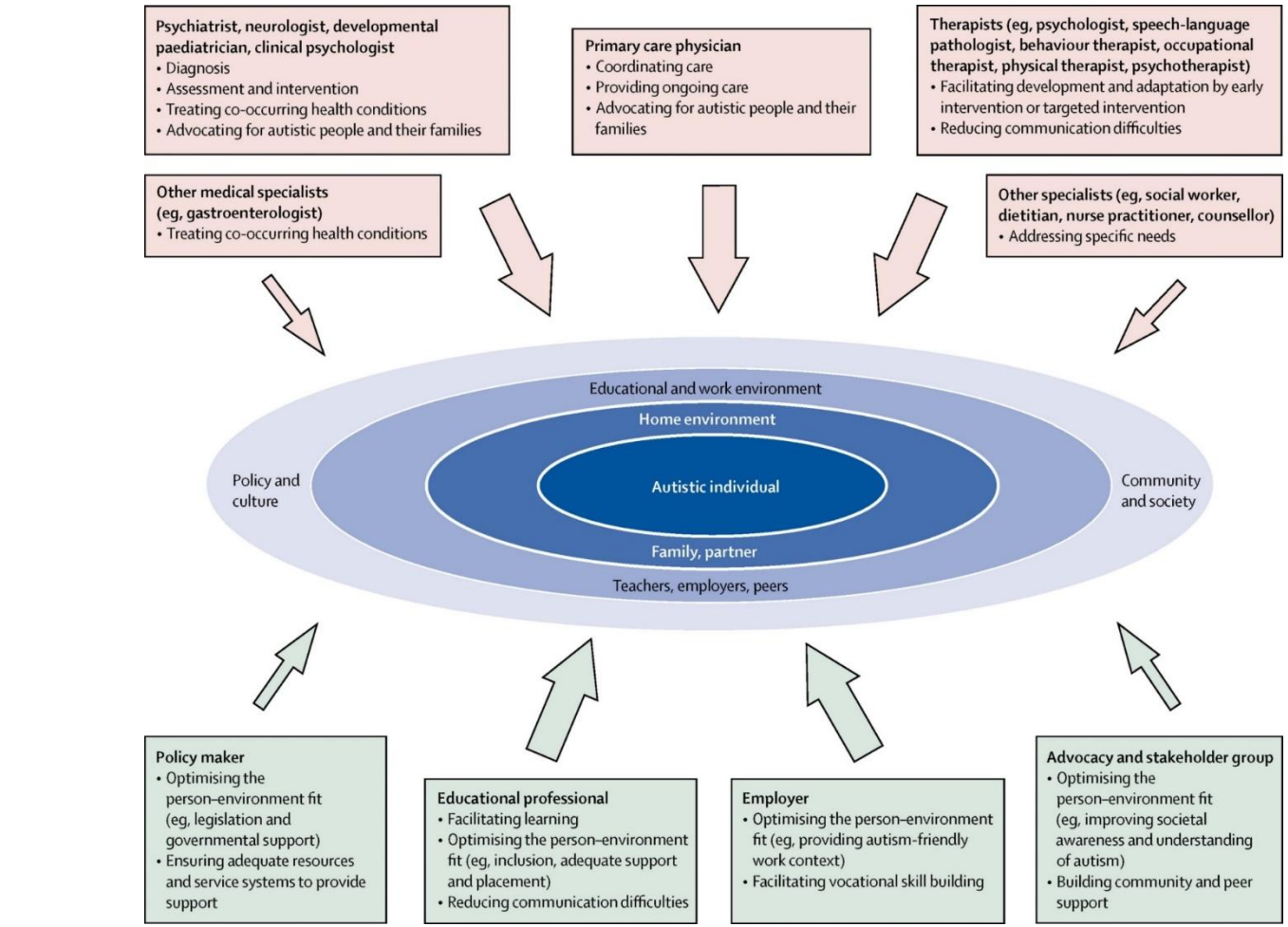
Klinger, L. et al. 2014



Huguet et al., 2016
Neuronal and Synaptic Dysfunction in ASS and ID

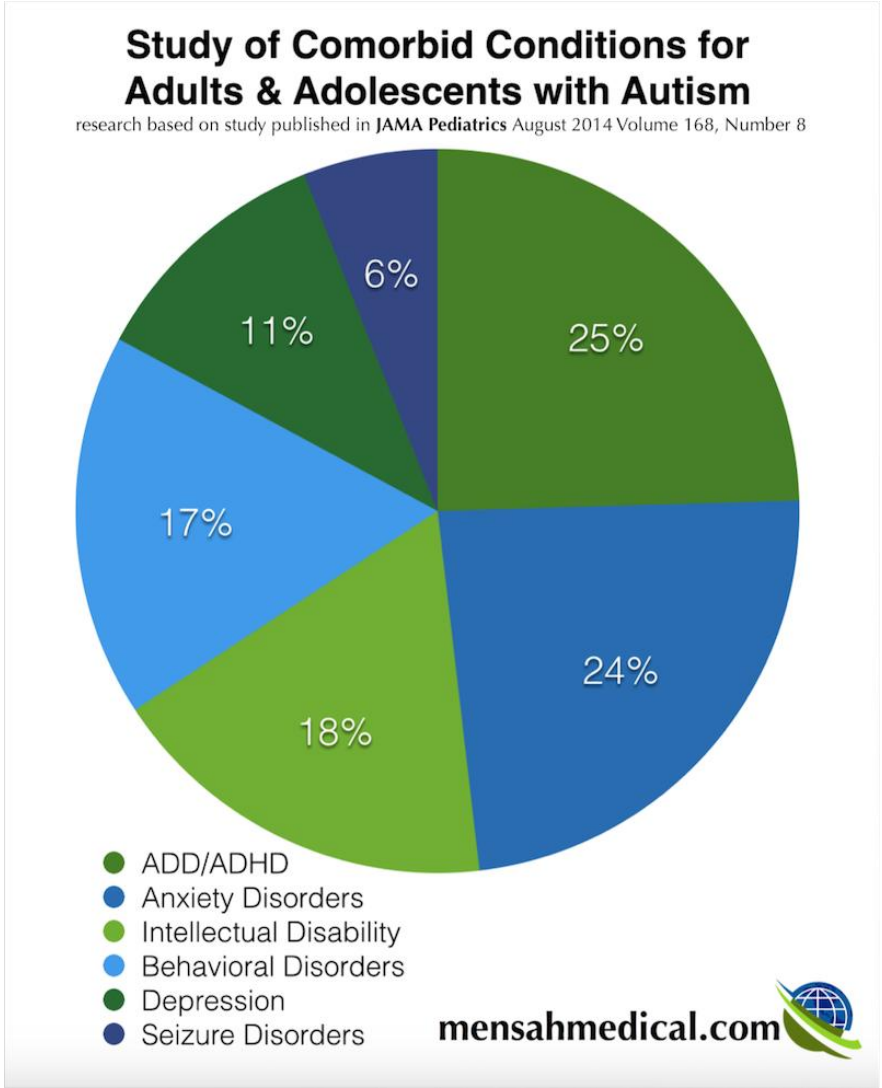


Gonatopoulos-Pournatzis et al., Molecular Cell 2018

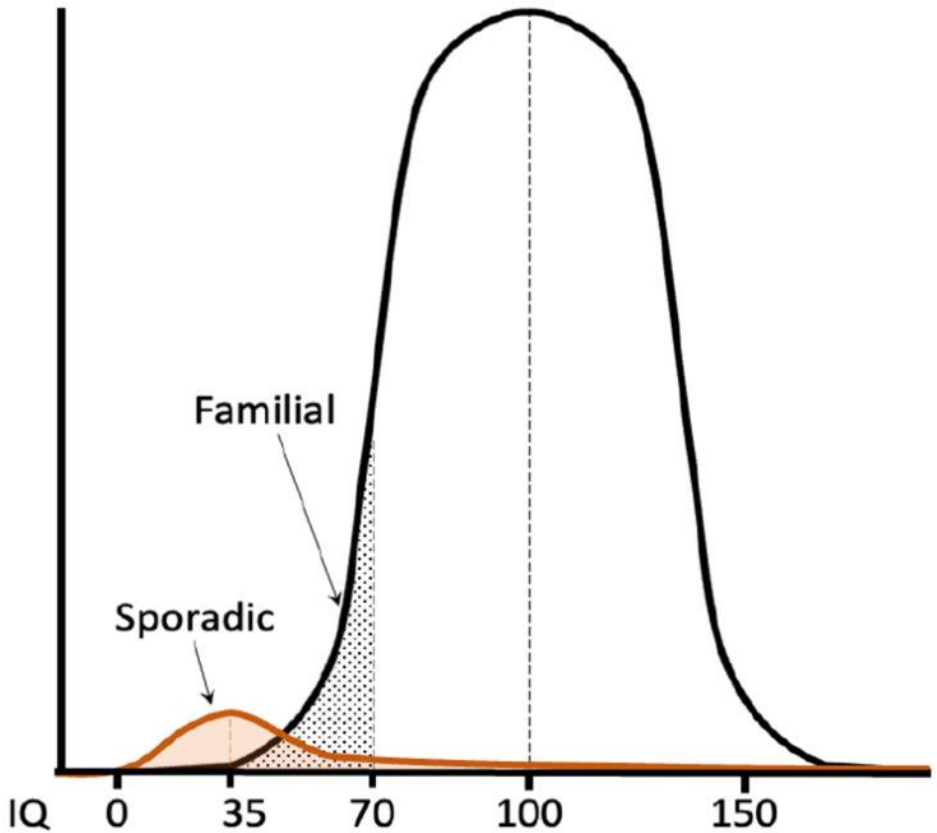


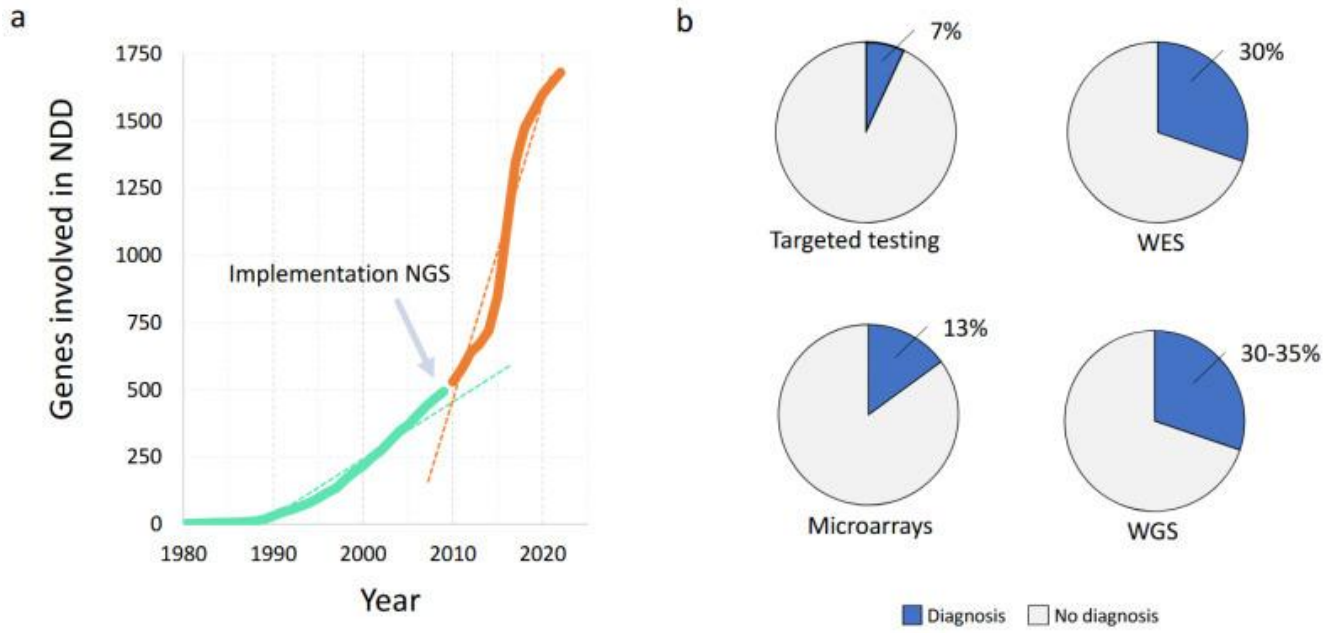
Lai et al., Lancet 2020; Lord et al., Lancet 2022

© Life Course Outcomes Research Program, A.J. Drexel Autism Institute, Drexel University

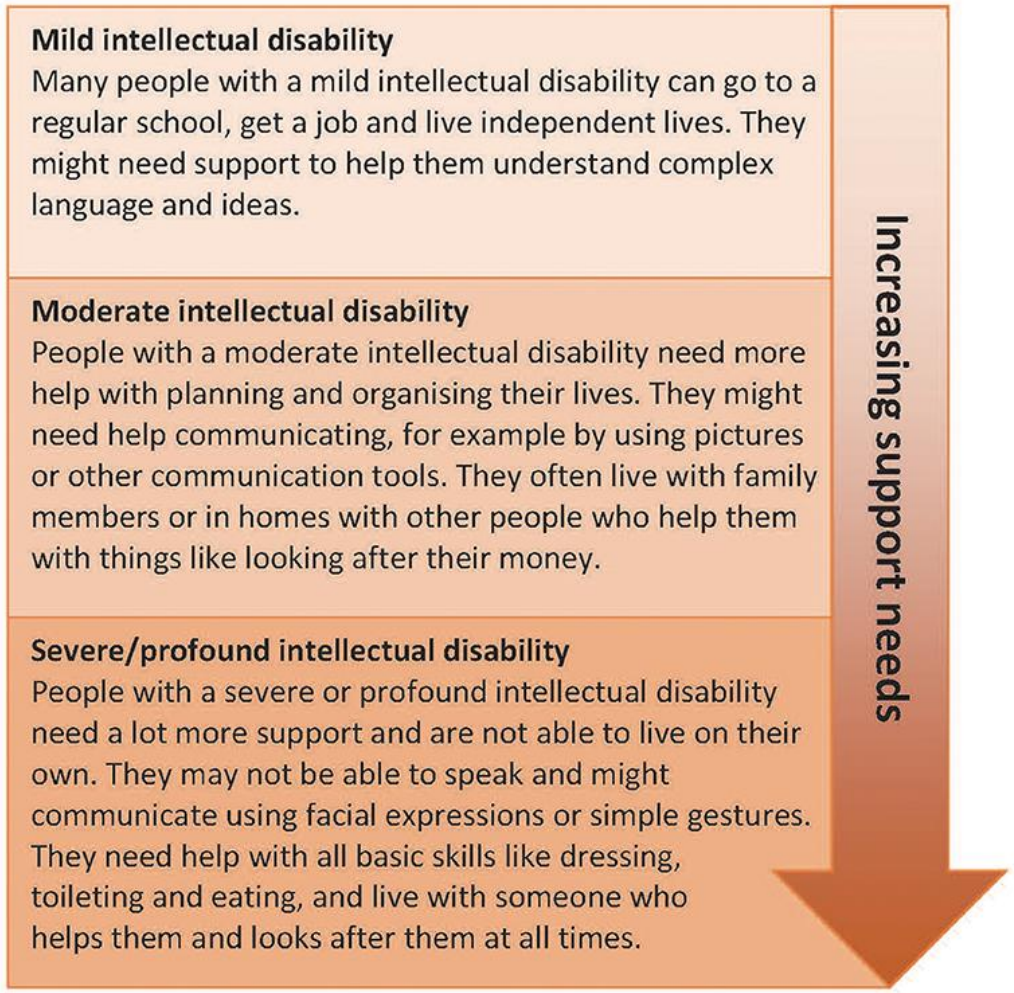

Study of Comorbid Conditions for Adults & Adolescents with Autism
research based on study published in JAMA Pediatrics August 2014 Volume 168, Number 8
25%
24%
18%
17%
11%
6%
ADD/ADHD
Anxiety Disorders
Intellectual Disability
Behavioral Disorders
Depression
Seizure Disorders
mensahmedical.com

Intellectual Disability


Familial
Sporadic
IQ
0
35
70
100
150

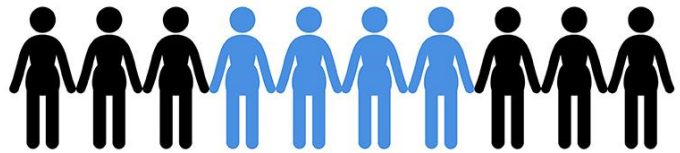


Jansen S, Vissers LELM, de Vries BBA. The Genetics of Intellectual Disability. Brain Sci. 2023 Jan

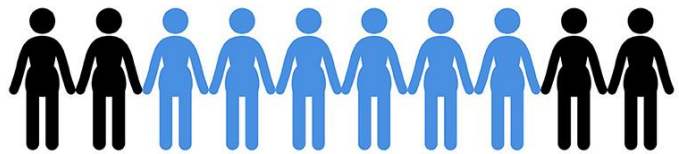


Reppermund et al. 2019

In the past 12 months, 4 in 10 people in the general population experienced physical health problems



In the past 12 months, 6 in 10 people with an intellectual disability experienced physical health problems



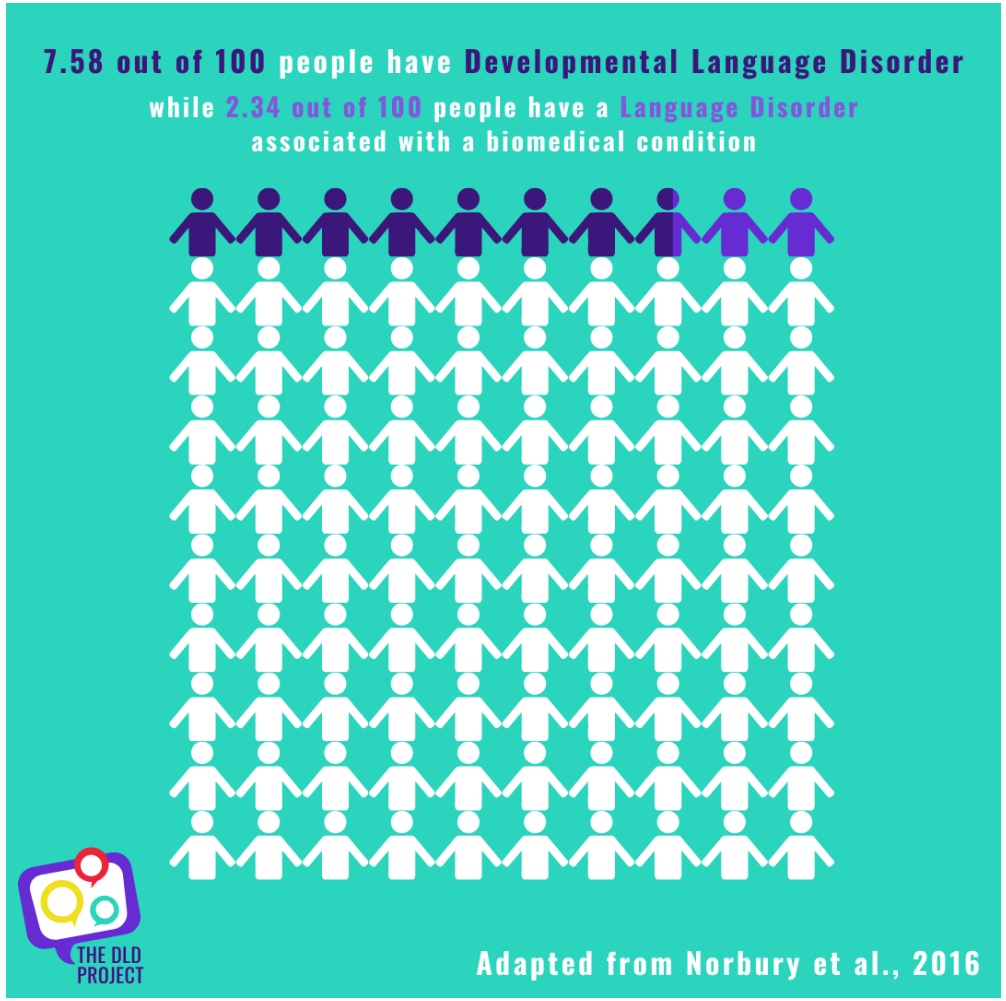
In the past 12 months, 2 in 10 people in the general population experienced mental health problems

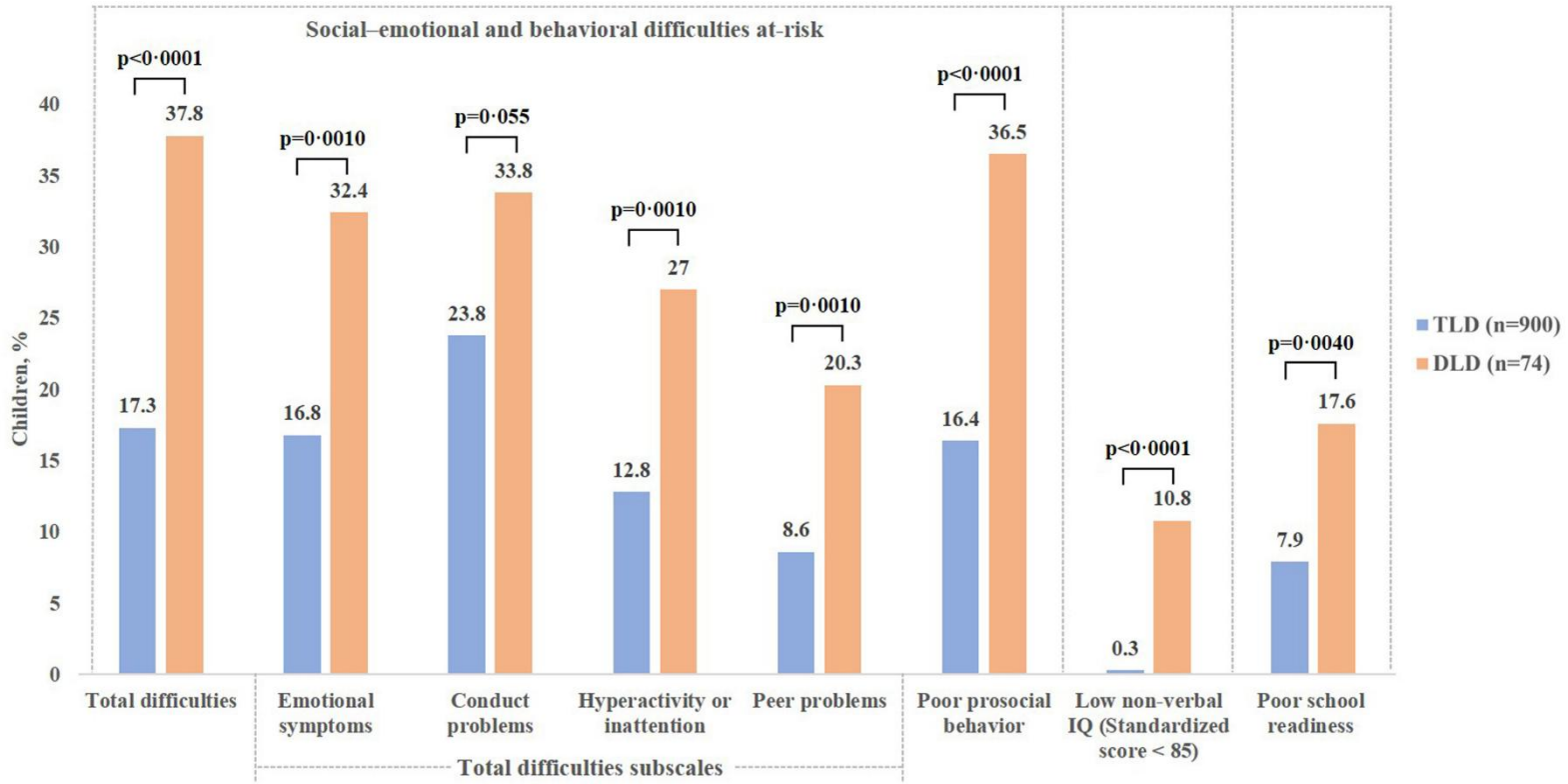
In the past 12 months, 4 to 5 in 10 people with an intellectual disability experienced mental health problems

Reppermund et al. 2019

Reppermund et al. 2019

Developmental Language Disorders


7.58 out of 100 people have Developmental Language Disorder
while 2.34 out of 100 people have a Language Disorder
associated with a biomedical condition
THE DLD PROJECT
Adapted from Norbury et al., 2016



Wu, Saishuang et al. 2023; The Lancet Regional Health, Volume 34, 100713

Table 2. Education and employment rates for developmental language disorder (DLD) and comparison groups.

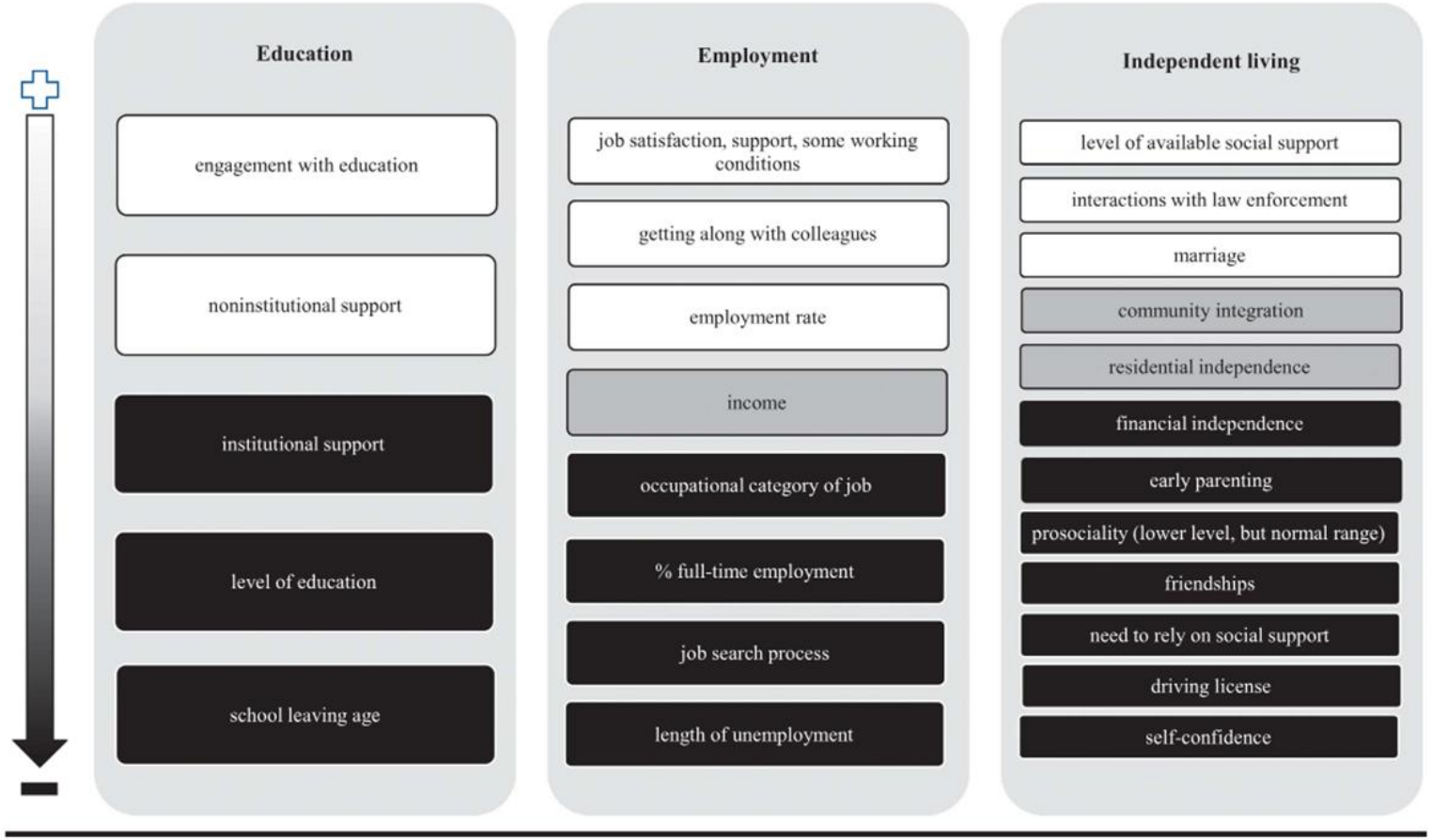
Study	Mean age DLD group (years. months ± *SD*)	% Engaged in education		% Completed high school		% Completed university		% Full-time employment		% Part-time employment		% Total employment	
		DLD group	Comp. group	DLD group	Comp. group	DLD group	Comp. group	DLD group	Comp. group	DLD group	Comp. group	DLD group	Comp. group
Conti-Ramsden & Durkin (2012)	19.9 (19.3–20.5)[a]	54	64	—	—	—	—	26	26	4	2	30	28
Conti-Ramsden et al. (2018)	24.4 ± 0.65	18	31	—	—	10	41	36	53	30	19	66	73
Johnson et al. (2010)	24.7 ± 0.58[b]	20	25	76	92	3	32	61	67	—	—	76	82

Note. The use of "—" indicates that the rate is not reported in the study. Comp. group = comparison group.

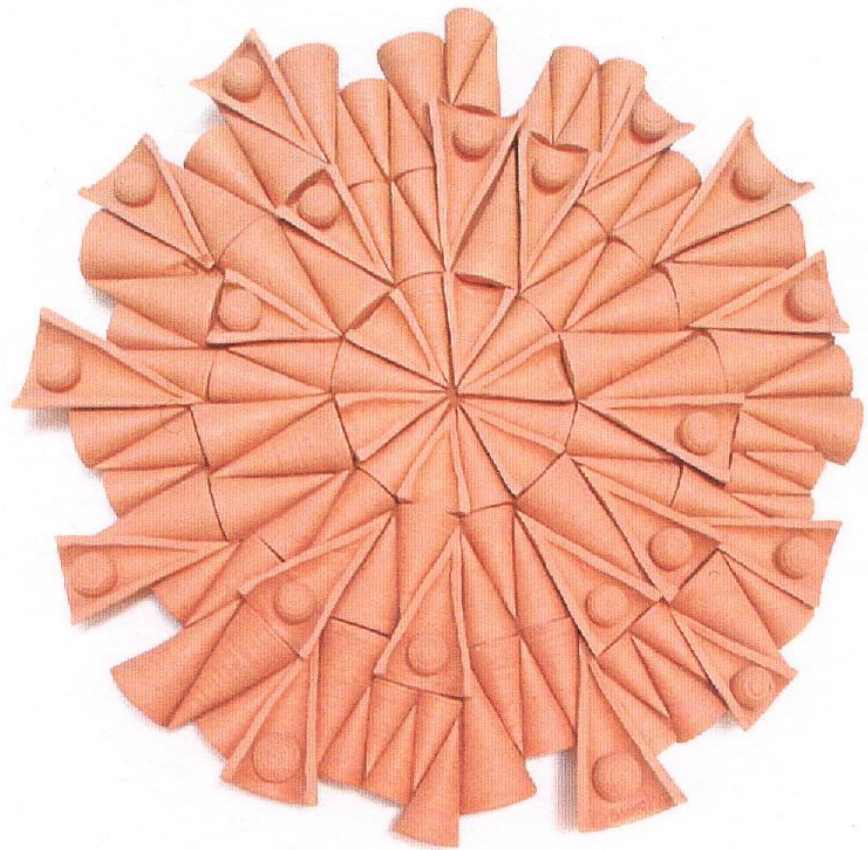
[a]Standard deviation value was not available in this study; minimum and maximum values are thus reported. [b]Mean age of all the participants.

Dubois et al., 2020, Journal of Speech Language and Hearing Research: Young Adults With Developmental Language Disorder: A Systematic Review of Education, Employment, and Independent Living Outcomes

Figure 2. Synthesis of outcomes for young adults with developmental language disorder (DLD) by life area. White = area of similar outcome for young adults with DLD and their peers without DLD; gray = area of nonagreement across studies for young adults with DLD (similar outcomes and disadvantage both reported); black = area of disadvantage/challenge in outcomes for young adults with DLD.



Dubois et al., 2020, Journal of Speech Language and Hearing Research: Young Adults With Developmental Language Disorder: A Systematic Review of Education, Employment, and Independent Living Outcomes

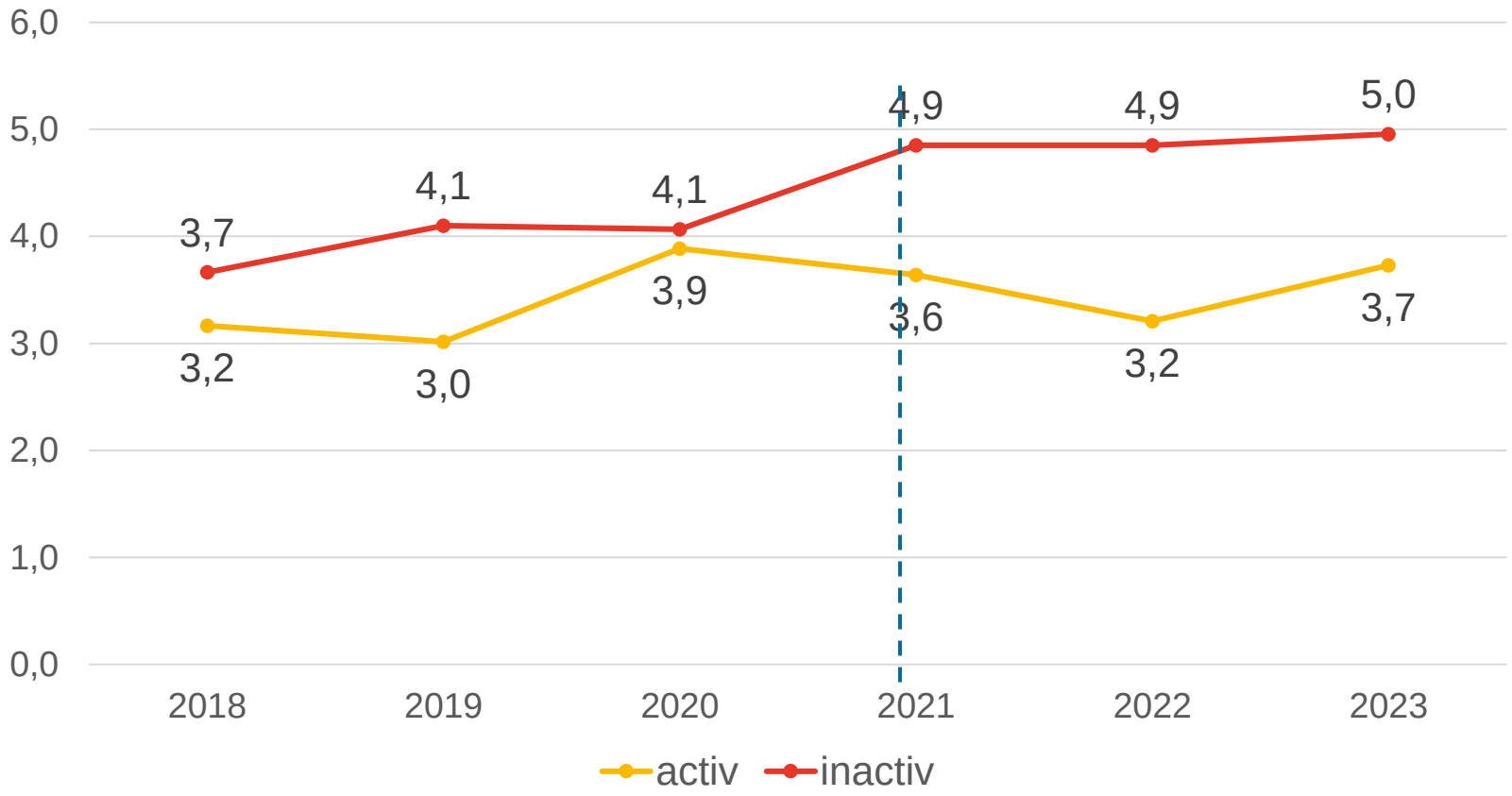


PART III

DISCUSSION

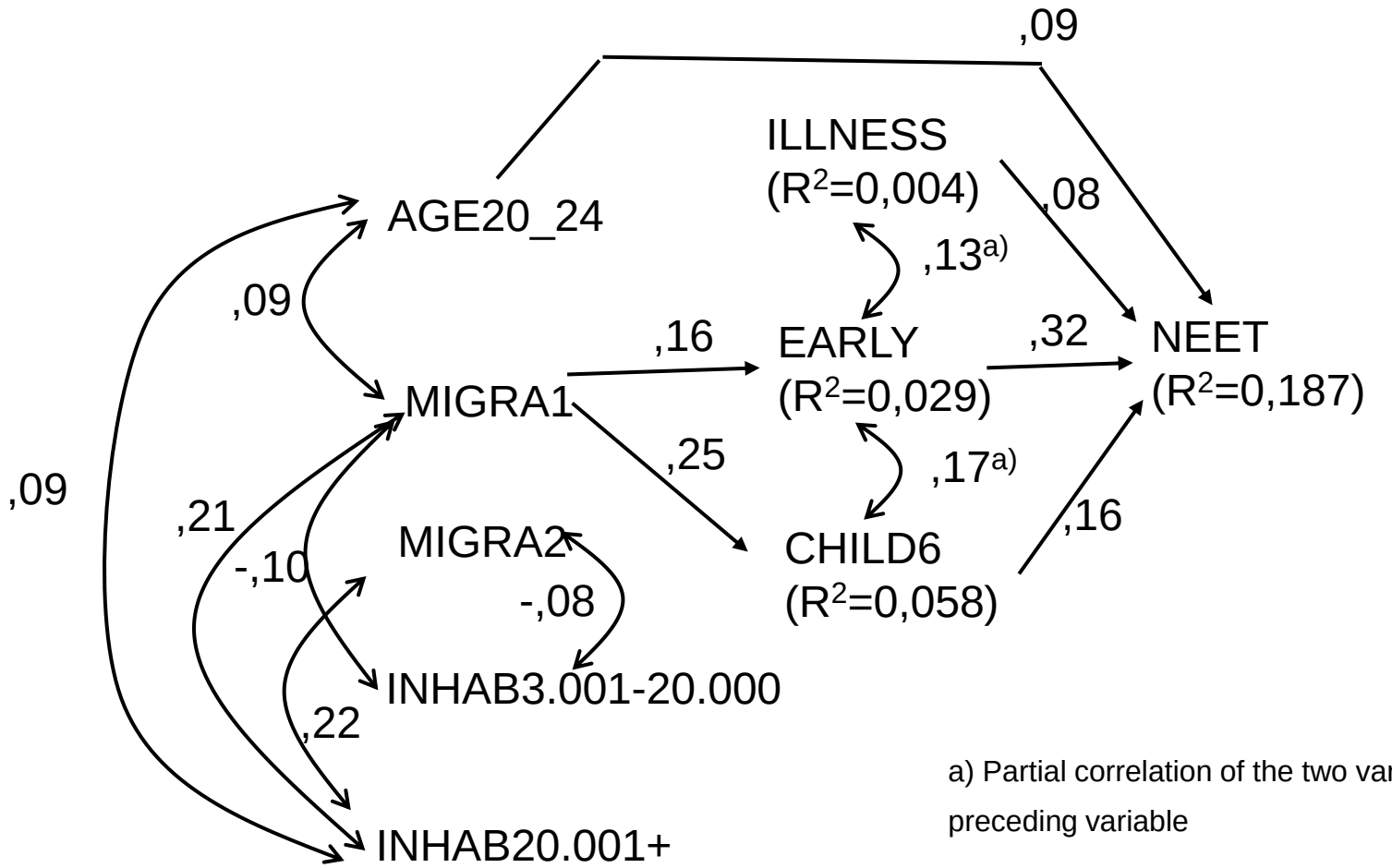
APPENDIX

NEET-RATES OF 15- TO 24-YEAR-OLDS BY YEAR (IN %)



Source: MZ2018-2023, calculation by the author

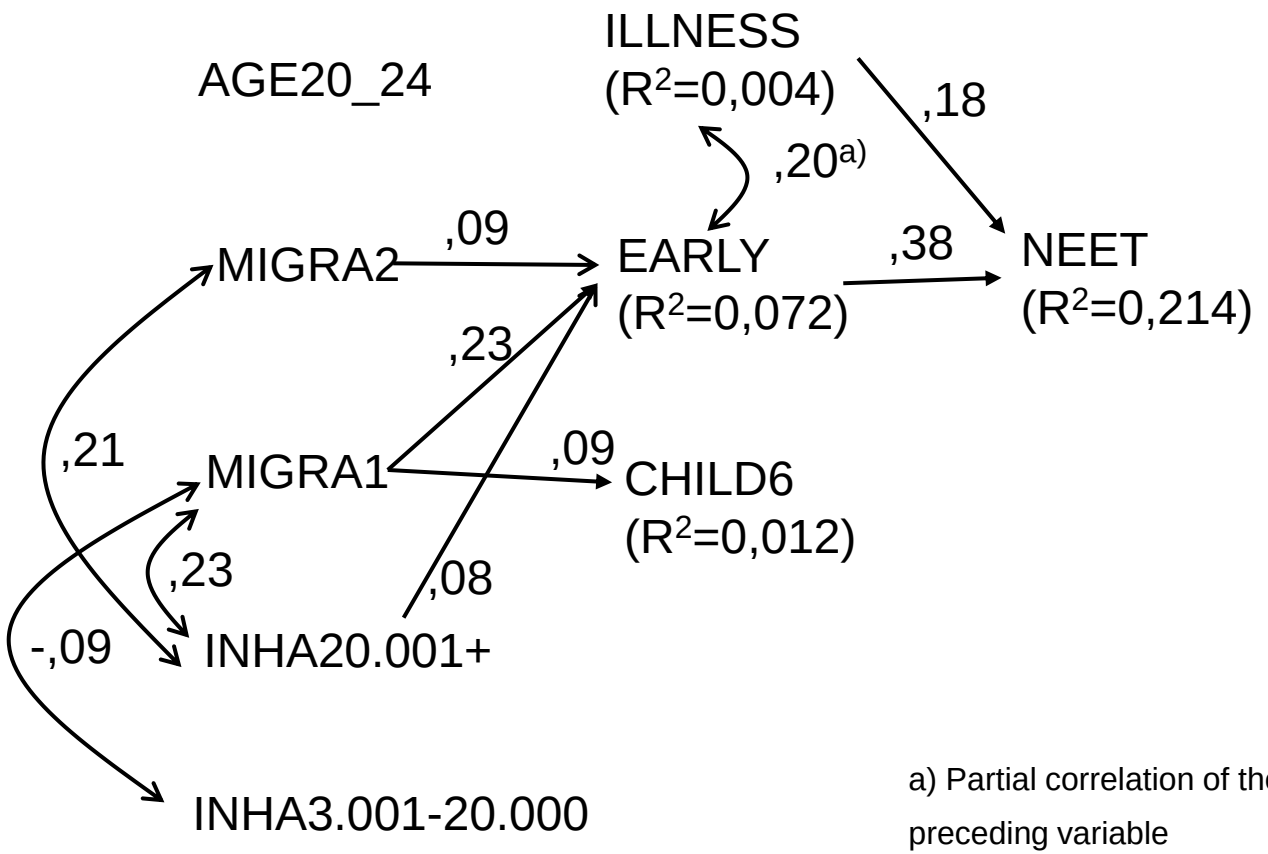
MAIN CAUSES FOR FEMALE YOUNG PEOPLE



a) Partial correlation of the two variables under control of the preceding variable

Source: MZ2018, calculation by the author

MAIN CAUSES FOR MALE YOUNG PEOPLE



a) Partial correlation of the two variables under control of the preceding variable

Source: MZ2023, calculation by the author

COSTS OF NEET AND OF SOCIAL EXCLUSION

- Estimation by Eurofound (2012) → gross-costs for society as a whole
- Update and expanding the costs estimate of Eurofound-Estimation → gross costs for society and state (public sector) (Bacher 2020)
- Comprehensive cost estimation (net) for early school leaving for society as a whole, those affected, the state (public sector) and companies (Bacher 2023)
- Social and political costs of early school leaving (Bacher et al. 2010, Moosbrugger et al. 2019, Kvir et al. 2025)

UPDATE AND EXPANDING THE COST ESTIMATE

	per case	total (rounded)
NEET young people aged 15 to 24 who have not been employed for at least six months	1	43,500 cases
Income from transfer payments („unit public finance cost“)	1,271	55,300,000 €
Lost income incl. lost revenue from taxes and social contributions (“unit resource cost”)	16,520	719,400,000 €
Total costs	**17,791**	**774,800,000 €**
Loss of government revenue		
Employee: social security and income tax	2,559	111,400,000 €
Employer: social security contributions	4,635	201,900,000 €
Revenue from sales tax assuming a mixed tax rate of 16% and a savings rate of 2%	2,189	95,300,000 €
Total loss	**9,383**	**408,600,000 €**

Results for 2018

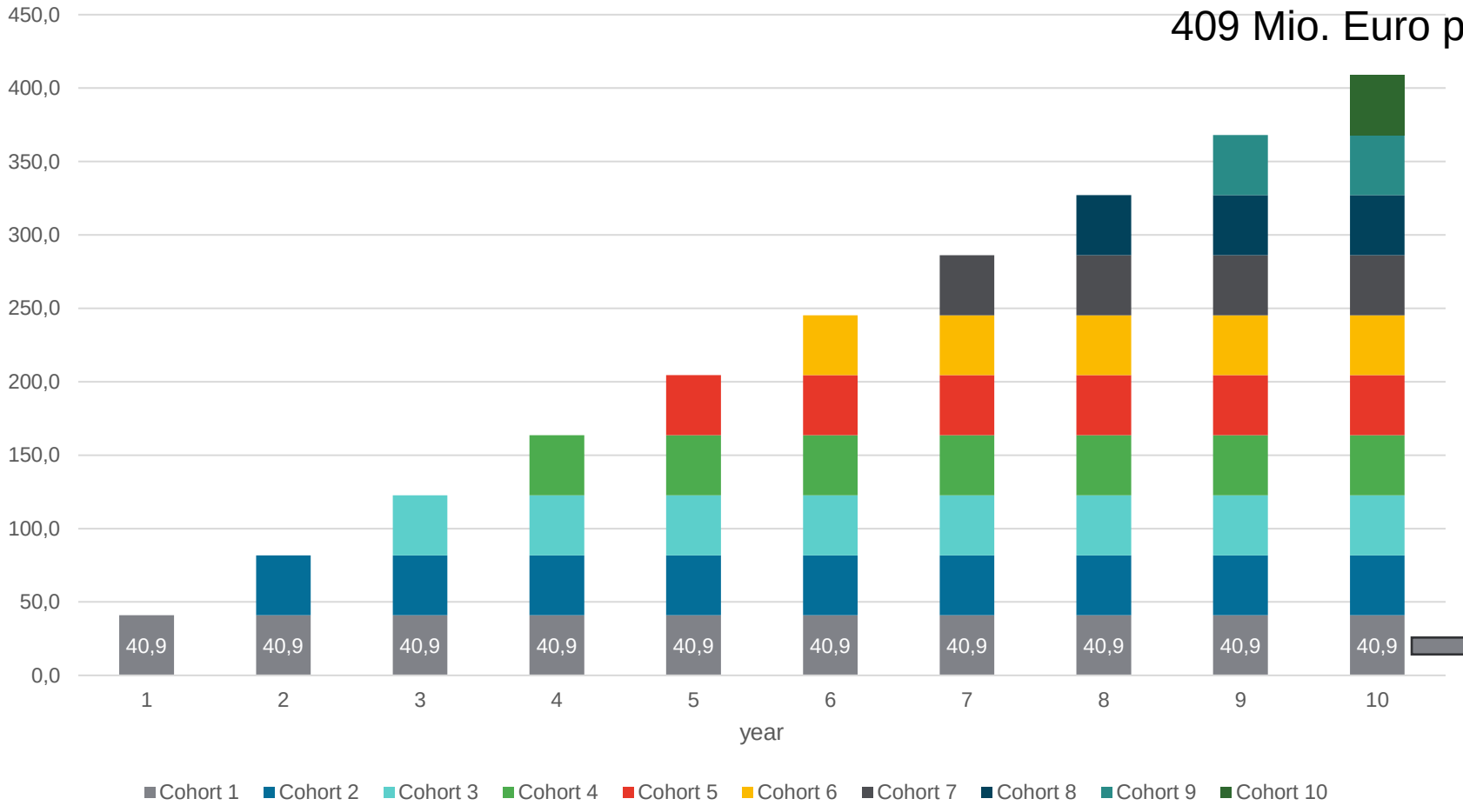
Consumer price index 2018 → 2024:

127.5

Source: Bacher (2020)

Public Cost of NEETs per Cohort 2018

409 Mio. Euro per year for 15- to 24-olds



- Scarring-Effects,
- Multiplicators and
- Health costs not included

Aggregated costs of cohort 1 after 10 years = 409 Mio. Euro, after 20 years = 818 Mio. Euro After 30 years =1,227 Mio. Euro

Cost for one cohort = cost per unit x number of cases

RISK FACTORS

Family risk factors	Social risk factors	Personal risk factors
– Divorce or separation of parents – Unfavorable parenting practices – Family conflicts – Experiences of violence – Placement in out-of-home care – Low socio-economic status – Remarriage or changing partnerships of the parents – Illnesses of the parents – Losses within the family	– Unfavorable peer influence – Negative school or work experiences – Unemployment – Experiences of exclusion – Frequent changes of residence – Loss of friends – Debts – Abuse to drugs – Precarious housing situation – Experiences of violence	– Difficult temperament – Chronic illnesses – Lack of self-confidence, self-efficacy, social skills

Source: Bacher et al. (2016: 143)

CHARACTERISTICS OF ADOLESCENTS AND THEIR MOTHERS AT THE TIME OF BIRTH

Results of analysis of administrative data

Variable	Job seeking (unemployed)	employed / dual education	difference	p-value
Birth weight (grams)	3.275	3.334	-59	0,000

SOME EXAMPLES OF EARLY INTERVENTION

Early childhood intervention (“Frühe Hilfen”)

- 2009 founding of the Family Network in Vorarlberg
- 2011 development of model for Austria by “Gesundheit Österreich GmbH” (GÖG)
- 2015 establishment and expansion of regional early help networks in all Austrian federal states, Austrian National Centre for Early Childhood Interventions (NZFH.at)
- 2022 – 2024 roll-out (financed by funds from the European Recovery and Resilience Facility (RRF))

https://nzfh.at/fruehe-hilfen

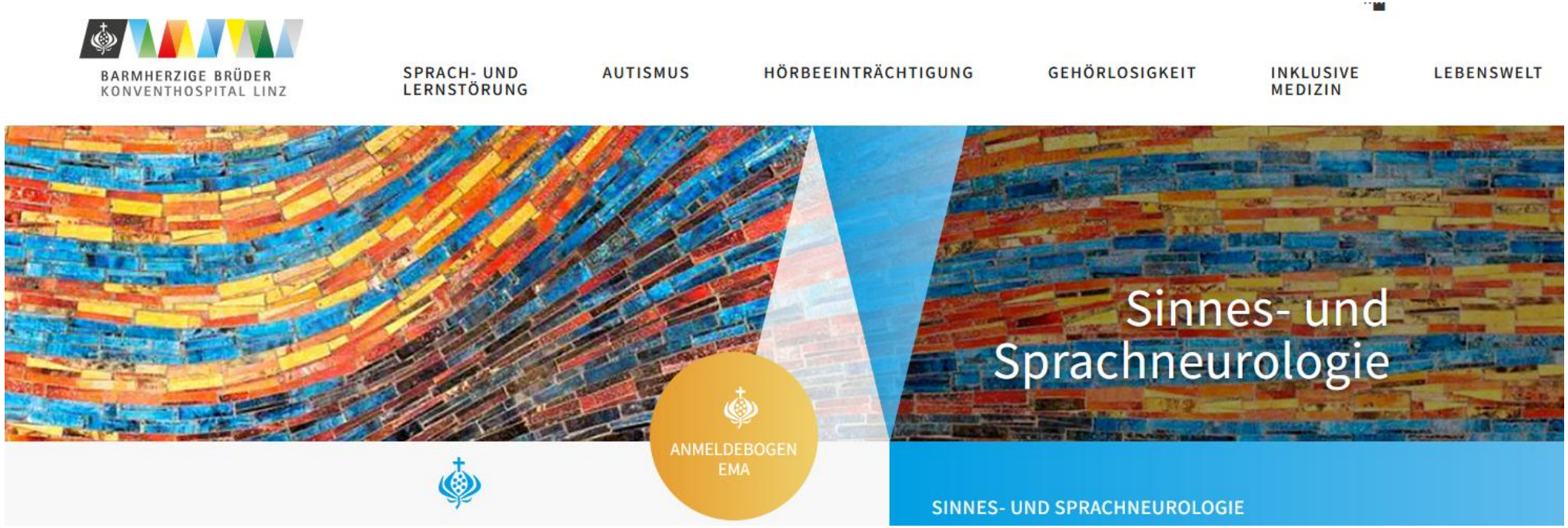
https://maps.goeg.at/fruehe-hilfen-netzwerke

https://nzfh.at/sites/nzfh.at/files/inline-files/Evaluation_RRF_Fru%CC%88he_Hilfen_Endbericht_prospect.pdf

SOME EXAMPLES OF EARLY INTERVENTION

Institute of Sensory Neurology and Language Neurology
(Prim. Holzer, founder Prim. Fellinger)

- supports people with problems in the areas of communication, speech, hearing and learning and their environment to develop their personal potential through diagnostic, therapeutic, social and educational services https://www.barmherzige-brueder.at/portal/issn



SUPPORT-STRUCTURE AND PROGRAMS FOR ADOLESCENTS

- Compulsory training until the age of 18 (“Ausbildungspflicht bis 18”) and training guarantee until the age of 25 (“Ausbildungsgarantie bis 25”)
- Youth coaching (“Jugendcoaching”)
- Medical services provided by the healthcare system (e.g. adolescent psychiatry, “Jugendpsychiatrie”)
- Offers from the psycho-social support system (e.g. open youth work, counseling and support services --> Pro-Mente: resp@ct, “Institut für Suchtprävention”, etc.)
- School services (e.g. school social work, school psychology)
- Offers from the labor market service (e.g. counseling, financial support, financing of courses)

PRO MENTE OÖ: RESP@CT/START.BOX

- ESF funding between 2017-2019, further funding until 2022
- Low-threshold services with group and individual support
- Open access, interface between youth coach and other facilities (production school, apprenticeship, etc.)
- Multi-professional team with many additional qualifications,
- Involvement of a volunteer employee
- Now: e.g. Start.Box

RESP@CT

pro mente jugend

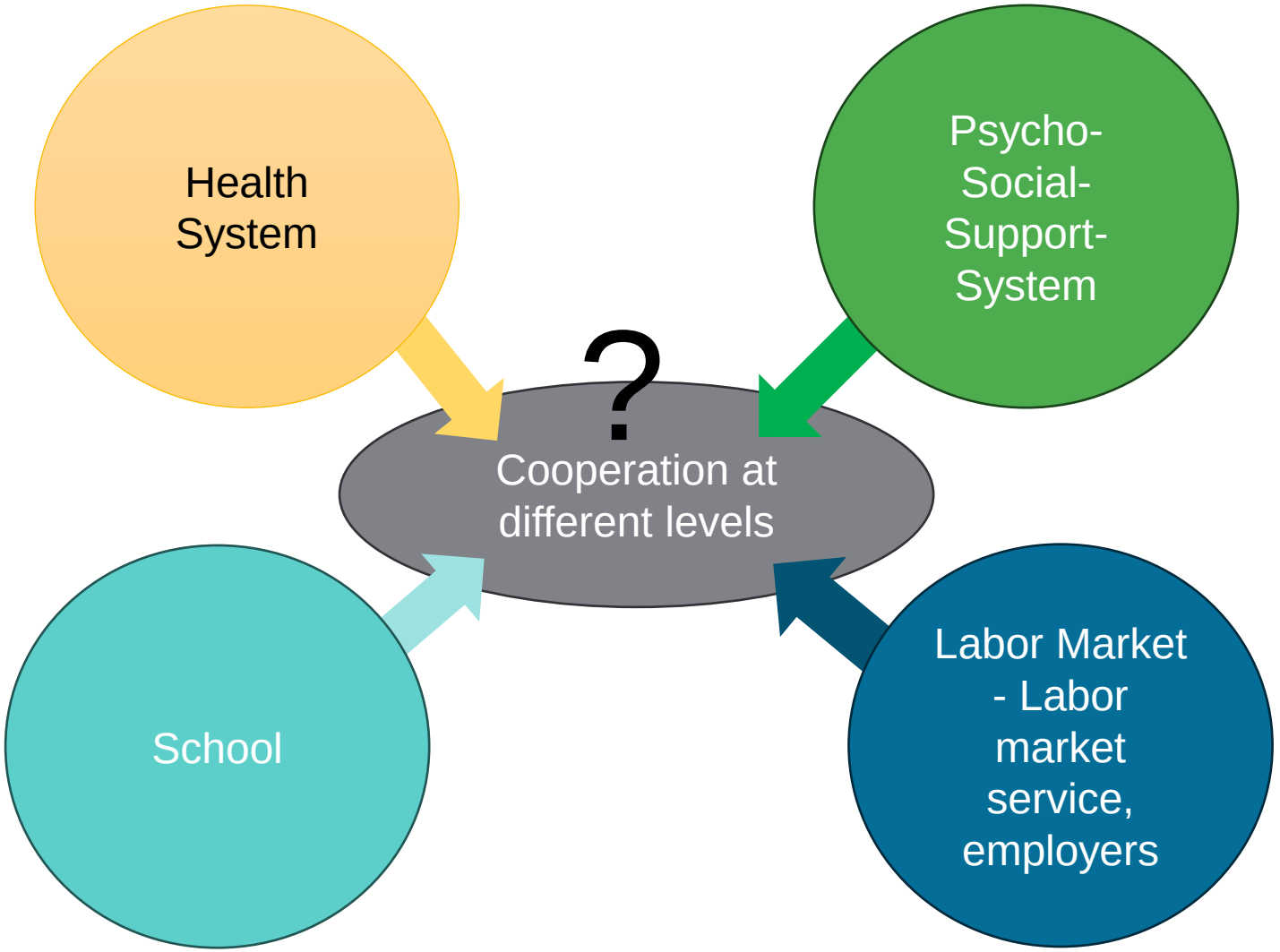
Unsere Angebote

Home › start.box

Wir stärken dich und zeigen dir, wie du Probleme lösen kannst!“

start.box – Zentrum für psychische Gesundheit junger Menschen

COOPERATION OF DIFFERENT SYSTEMS



PARTICIPATION (IN DECISION MAKING)