Practice exam Child & Adolescent Public Health

Question 1. (6 points)

a. What are the three main aspects of Participating Action Research (PAR)? **(3 points)**

1. The purpose of Participating Action Research is to enable action
2. Power relations blur: the target group become partners. They are co-researchers in the entire research process
3. 'Respondents' and 'research objects' no longer exist, as those being researched are actively involved in the research process.

b. For what two kind of groups does PAR work best and why? **(3 points)**

Underserved and neglected groups. The research group is involved and valued in every stage of the research. Additionally, they get the opportunity to take action in their own lives. This can create more sense of ownership and empowerment, something that is more often lacking in these groups.

Another option: Underserved and neglected groups. These groups are hard to reach by a lot of interventions. A research gap exists between what these groups actually need and what is offered to them. Research findings from one setting, cannot always be applied to other situations. By involving them in the research process, action that is being taken will suit their requirements better.

Question 2 (6 points)

What are the acute and chronic consequences of alcohol intoxication in adolescents? Name 3 acute **(3 points)** and 3 chronic **(3 points)** consequences.

The **acute** consequences of alcohol intoxication, such as

A. hypothermia,
B. reduced consciousness
C. electrolyte disturbances
D. death

In the **long term**, however, alcohol use at a young age is related to several harmful chronic problems, such as

A. unintentional injury, violence, and delinquency
B. unwanted sexual experience
C. smoking, cannabis, and other drugs use
D. negative effect of alcohol on brain function in particular have a negative effect on higher cognitive functions
E. alcohol use in early adolescence predicts alcohol use in early adulthood and at a mature age

Question 3 (8 points)

Case

Baby James is five weeks old when his mother presents him at the paediatric department, after referral by her GP. He is the third child of this mother and the first of his father.
Mother tells the paediatrician that James is crying a lot and is not gaining weight. Since one week he is also vomiting after each feed (bottle) according to mother and sometimes he even vomits against the wall / side of his cot.

Question 3 a (2 points)
You are the paediatrician, what is the differential diagnosis of this patient? (Give three possible diagnoses)

1 regurgitation
2 pyloric stenosis
3 (urinary tract) infection

You propose to admit the child and observe him on the ward. Mother is rooming in and takes care of all the feeding moments. James doesn`t gain weight after one week and therefore he is analysed further (blood tests, ultrasound). No abnormal results are found. No vomiting is observed.

Question 3 b (2 points)
What should be included in the differential diagnosis at this moment?

Paediatric condition falsification (PCF)

Question 3 c (4 points)
What is your next best step as paediatrician? Give the motivation for this step, and what will be the advice given? **(1 point for the next step, 1 point for the motivation, 2 point for advice)**

You consult the doctor of the Center for child protection (CPS).
The motivation is that in the consultation with CPS you can discuss the possibility of PCF.
The advice of CPS will be to admit the child longer without mother rooming in. Feeding only by nurses. Mother may see James only when accompanied by a professional from the ward or the CPS.

Not correct:
James will be discharged and the community nurse is asked to do home visits and monitor the growth, and James will visit the OPD after one week.
Dit is onlogisch want hij groeit immers niet,
You install a covert video surveillance in his room without informing the parents. Dit mag juridisch pas na fiat van politie/OM, je moet dan ook 24/7 iemand hebben die naar de beelden kijkt)

Question 4 (8 points)

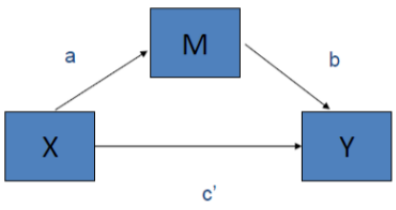
Answer the following questions based on the abstract section below.

Objective: Family processes are a risk factor for suicide but few studies target this domain. We evaluated the effectiveness of a family intervention, the Resourceful Adolescent Parent Program (RAP-P) in reducing adolescent suicidal behaviour and associated psychiatric symptoms. Method: A preliminary randomized controlled trial compared RAP-P plus Routine Care (RC) to RC only, in an outpatient psychiatric clinic for N = 48 suicidal adolescents and their parents. Key outcome measures of adolescent suicidality, psychiatric disability, and family functioning were completed at pre-treatment, 3-month, and 6-month follow-up. Results: RAP-P was associated with high recruitment and retention, greater improvement in family functioning, and greater reductions in adolescents' suicidal behaviour and psychiatric disability, compared to RC alone. Benefits were maintained at follow-up with a strong overall effect size. Changes in adolescent's suicidality were largely mediated by changes in family functioning. Conclusion: The study provides preliminary evidence for the use of family-focused treatments for adolescent suicidal behaviour in outpatient settings.

Reference: Family Intervention for Adolescents With Suicidal Behaviour: A Randomized Controlled Trial and Mediation Analysis. Pineda J and Dadds M. J. Am. Acad. Child Adolesc. Psychiatry, 2013;52(8):851–862.

Question 4 a (4 points)

Draw a figure containing the a, b and c'-path of the described mediation analysis and specify the corresponding regression models to calculate the a, b and c'-path.



X= intervention
Y = suicidality
M = mediator here family function

Note: you don't have to reproduce the exact formulas as showed below, but you need to be able to explain how you can detect a mediating effect by using statistical analysis.

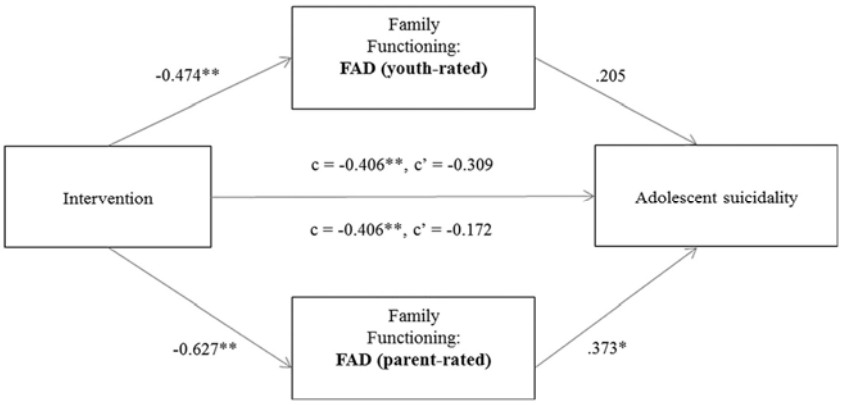
a-path: family function (M) = intercept + a * interventie (X) + error
c-path: suicidality (Y) = intercept + c * interventie (X) + error
c'-path: suicidality (Y) = intercept + c' * interventie (X) + b * family function (M) + error
~~b-path: suicidality (Y) = intercept + b * family function (M) + c' * interventie (X)~~

a = Action Theory Test
b = Conceptional Theory Test
c = direct effect
c'= mediated effect

or:

Effect intervention on the potential mediators (Action Theory Test)):
a: Mediator =intercept M +alpha X(intervention) +error variance Mediator

Effect of the intervention on suicidality, adjusted for the mediator (Conceptual Theory Test): c': Y=iY +c'X + bM + eY → and derive from that the b-path



Question 4 b (2 points)

b.1.Consider the case that there is a significant mediating effect. Describe the practical consequences of the outcome of the mediation analysis on the intervention.

b.2 Now describe the practical consequences if there is no significant mediating effect.

1. In the case of a significant mediation effect: include the mediator(s) in future interventions

2. In the case of a non-significant a-path, but a significant b-path: use more effective intervention strategies
3. In the case of a non-significant b-path: remove the intervention component aimed at this mediator

Question 5. (6 points)

5.a. Name 6 social determinants of health.

(3 points, 0,5 point per good answer)

Social Exclusion
Work
Unemployment
Social support
Addiction
Transport
Stress
Social gradient
Food
Early Life

5.b. Cite a specific example of a social determinant of Health and its impact on child/adolescent health. **(3 points)**

Examples and impact:
-Example Food: Poor access can lead to malnutrition which can cause death, stunting, severe deficiency such as iodine, Iodine deficiency can lead to mental retardation, goiter, lower IQ.

-Example Early Life: Poor prenatal health can lead to less than optimal foetal development and even influence adult health, for example with babies born to moms who take cocaine during pregnancy,
Slow growth in infancy can lead to reduced organ function,
Poor infant sensory or cognitive input can lead to insecure attachment, problem behaviour, poor health habits, etc.
Child abuse can cause substance abuse, problem behaviours

-Example Social exclusion: Results from racism, discrimination, poverty, increased risk of behavioural and intellectual problems w/ poverty.

Question 6 (6 points)

Name four risk factors (**4 points**) and two protective factors (**2 points)** for child abuse

Risk factors:

- Substance (ab)use
- Adverse childhood experiences (for example in the past victim of domestic violence)
- Intimate partner violence
- Low socioeconomic status

- Young age during pregnancy
- Being a single parent
- Stress
- Parenting stress
- Psychosocial problems (depression, anxiety, low self-esteem etc.)
- Acceptance of violence

Protective factors:

- Supporting social network
- Supporting partner
- Being aware of adverse childhood experiences

Question 7 (6 points)

Exposure to childhood maltreatment / adversity account for 45% of the population attributable risk for childhood onset psychiatric disorders. Survivors of childhood maltreatment show higher adult rates of psychopathology, and physical problems like ischemic heart disease, cancer, and shortened telomeres associated with reduced life expectancy.

Name three evidence based interventions to reduce the symptoms of Posttraumatic stress disorder in children.

- Trauma focused cognitive behavior therapy (TF-CBT)
- eye movement desensitization and reprocessing therapy (EMDR);
- multi-systemic therapy (MST); and parent-child interaction therapy (PCIT).

Question 8

A researcher in a clinic for girls with eating disorders asks you to investigate the following research question: “What is the relationship between having an eating disorder and sexual abuse during childhood?”.

Which study design would you choose to answer this research question? Substantiate your answer.

Case-control studie; je start vanuit de ziekte (eetstoornis) en kijkt terug of er sprake was van seksueel misbruik in de kindertijd. Hierbij heb je ook een (gematchte) controlegroep nodig om te kijken of er vaker sprake is geweest van seksueel misbruik in de kindertijd bij de meisjes met een eetstoornis vs meisjes zonder eetstoornis.