# Supplementary Files

## Supplememtary File 1. Questions of the expert survey

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| **Question** | **Answer options** |
| **Q1.** Please comment on the naming and the short definition of the item. Based on the name and the short description, is it clear to you what the item entails? | Yes/No (if no, please suggest an alternative name/definition that you believe is more clear) |
| **Q2.** Do you think that this item is applicable to students with mental disorders? | Yes/No (if no, please explain) |
| **Q3.** Do you think the list of items is complete? | Yes/No (if no, please mention additional items that you think are/can be applicable) |

## Supplementary File 2. Peer-reviewed sources included in the literature review (in alphabetical order)

1. **Ahern E, Kinsella S, Semkovska M** (2018) Clinical efficacy and economic evaluation of online cognitive behavioral therapy for major depressive disorder: a systematic review and meta-analysis*.* *Expert Rev Pharmacoeconomics Outcomes Res* **18**, 25-41.

2. **Allott KA, Killackey, E., Sun, P., Brewer, W. J., & Velligan, D. I.** (2017) Improving vocational outcomes in first-episode psychosis by addressing cognitive impairments using Cognitive Adaptation Training*.* *Work* **56**, 581-589.

3. **Anderson R, Ukoumunne OC, Sayal K, et al.** (2014) Cost-effectiveness of classroom-based cognitive behaviour therapy in reducing symptoms of depression in adolescents: a trial-based analysis*.* *J Child Psychol Psychiatry* **55**, 1390-7.

4. **Atkins MS, Cappella E, Shernoff ES, Mehta TG, Gustafson EL** (2017) Schooling and children's mental health: Realigning resources to reduce disparities and advance public health*.* *Annu Rev Clin Psychol* **13**, 123-147.

5. **Bachrach RL, Read JP** (2012) The role of posttraumatic stress and problem alcohol involvement in university academic performance*.* *J Clin Psychol* **68**, 843-59.

6. **Ball A, Rittner B, Chen YL, Maguin E** (2018) Impact of individualized education plans on academic success of youth with early onset schizophrenia*.* *J Evid Inf Soc Work* **15**, 534-549.

7. **Bastos AG, Guimaraes LS, Trentini CM** (2013) Neurocognitive changes in depressed patients in psychodynamic psychotherapy, therapy with fluoxetine and combination therapy*.* *J Affect Disord* **151**, 1066-75.

8. **Bauer A, Pawlby S, Plant DT, et al.** (2015) Perinatal depression and child development: exploring the economic consequences from a South London cohort*.* *Psychol Med* **45**, 51-61.

9. **Beecham J** (2014) Annual research review: Child and adolescent mental health interventions: a review of progress in economic studies across different disorders*.* *J Child Psychol Psychiatry* **55**, 714-32.

10. **Betancourt TS, McBain R, Newnham EA, et al.** (2014) A behavioral intervention for war-affected youth in Sierra Leone: a randomized controlled trial*.* *J Am Acad Child Adolesc Psychiatry* **53**, 1288-97.

11. **Bourke C, Porter RJ, Carter JD, et al.** (2012) Comparison of neuropsychological functioning and emotional processing in major depression and social anxiety disorder subjects, and matched healthy controls*.* *Aust N Z J Psychiatry* **46**, 972-81.

12. **Bowman S, McKinstry C, McGorry P** (2017) Youth mental ill health and secondary school completion in Australia: time to act*.* *Early Interv Psychiatry* **11**, 277-289.

13. **Brunoni AR, Tortella G, Bensenor IM, et al.** (2016) Cognitive effects of transcranial direct current stimulation in depression: Results from the SELECT-TDCS trial and insights for further clinical trials*.* *J Affect Disord* **202**, 46-52.

14. **Campbell R, Riggs SA** (2015) The Role of Psychological Symptomatology and Social Support in the Academic Adjustment of Previously Deployed Student Veterans*.* *J Am Coll Health* **63**, 473-81.

15. **Cha DS, Carmona NE, Subramaniapillai M, et al.** (2017) Cognitive impairment as measured by the THINC-integrated tool (THINC-it): Association with psychosocial function in major depressive disorder*.* *J Affect Disord* **222**, 14-20.

16. **Cuijpers P, Cristea IA, Ebert DD, et al.** (2016) PSYCHOLOGICAL TREATMENT OF DEPRESSION IN COLLEGE STUDENTS: A METAANALYSIS*.* *Depress Anxiety* **33**, 400-14.

17. **Dalagdi A, Arvaniti A, Papatriantafyllou J, et al.** (2014) Psychosocial support and cognitive deficits in adults with schizophrenia*.* *Int J Soc Psychiatry* **60**, 417-25.

18. **Dang J, Zhang J, Guo Z, et al.** (2014) A pilot study of iPad-assisted cognitive training for schizophrenia*.* *Arch Psychiatr Nurs* **28**, 197-9.

19. **Davies EB, Morriss R, Glazebrook C** (2014) Computer-delivered and web-based interventions to improve depression, anxiety, and psychological well-being of university students: a systematic review and meta-analysis*.* *J Med Internet Res* **16**, e130.

20. **Davis MC, Green MF, Lee J, et al.** (2014) Oxytocin-augmented social cognitive skills training in schizophrenia*.* *Neuropsychopharmacology* **39**, 2070-7.

21. **De Bellis MD, Woolley DP, Hooper SR** (2013) Neuropsychological findings in pediatric maltreatment: relationship of PTSD, dissociative symptoms, and abuse/neglect indices to neurocognitive outcomes*.* *Child Maltreat* **18**, 171-83.

22. **Deady M, Choi I, Calvo RA, et al.** (2017) eHealth interventions for the prevention of depression and anxiety in the general population: a systematic review and meta-analysis*.* *BMC Psychiatry* **17**, 310.

23. **Dodge KA, Bierman KL, Coie JD, et al.** (2015) Impact of early intervention on psychopathology, crime, and well-being at age 25*.* *Am J Psychiatry* **172**, 59-70.

24. **Dong J, Pi HC, Xiong ZY, et al.** (2016) Depression and Cognitive Impairment in Peritoneal Dialysis: A Multicenter Cross-sectional Study*.* *Am J Kidney Dis* **67**, 111-8.

25. **Drost RM, Paulus AT, Ruwaard D, Evers SM** (2017) Valuing inter-sectoral costs and benefits of interventions in the healthcare sector: methods for obtaining unit prices*.* *Expert Rev Pharmacoecon Outcomes Res* **17**, 77-84.

26. **Duffy SL, Paradise M, Hickie IB, et al.** (2014) Cognitive impairment with and without depression history: an analysis of white matter microstructure*.* *J Psychiatry Neurosci* **39**, 135-43.

27. **Dukhovny D, Dennis CL, Hodnett E, et al.** (2013) Prospective economic evaluation of a peer support intervention for prevention of postpartum depression among high-risk women in Ontario, Canada*.* *Am J Perinatol* **30**, 631-42.

28. **Fried EI, Nesse RM** (2014) The impact of individual depressive symptoms on impairment of psychosocial functioning*.* *PLoS One* **9**, e90311.

29. **Goodman SH, Garber J** (2017) Evidence-Based Interventions for Depressed Mothers and Their Young Children*.* *Child Dev* **88**, 368-377.

30. **Hawkrigg S, Payne D** (2014) Prolonged school non-attendance in adolescence: a practical approach*.* *Arch Dis Child* **99**, 954-957.

31. **Jansen PR, Polderman TJC, Bolhuis K, et al.** (2018) Polygenic scores for schizophrenia and educational attainment are associated with behavioural problems in early childhood in the general population*.* *J Child Psychol Psychiatry* **59**, 39-47.

32. **Jeon HJ, Woo JM, Lee SH, et al.** (2014) Improvement in subjective and objective neurocognitive functions in patients with major depressive disorder: a 12-week, multicenter, randomized trial of tianeptine versus escitalopram, the CAMPION study*.* *J Clin Psychopharmacol* **34**, 218-25.

33. **Kalache SM, Mulsant BH, Davies SJ, et al.** (2015) The impact of aging, cognition, and symptoms on functional competence in individuals with schizophrenia across the lifespan*.* *Schizophr Bull* **41**, 374-81.

34. **Kessler RC, Bromet EJ** (2013) The epidemiology of depression across cultures*.* *Annu Rev Public Health* **34**, 119-38.

35. **Khoo AL, Zhou HJ, Teng M, et al.** (2015) Network Meta-Analysis and Cost-Effectiveness Analysis of New Generation Antidepressants*.* *CNS Drugs* **29**, 695-712.

36. **Knapp M, Snell T, Healey A, et al.** (2015) How do child and adolescent mental health problems influence public sector costs? Interindividual variations in a nationally representative British sample*.* *J Child Psychol Psychiatry* **56**, 667-76.

37. **Kuyken W, Nuthall E, Byford S, et al.** (2017) The effectiveness and cost-effectiveness of a mindfulness training programme in schools compared with normal school provision (MYRIAD): study protocol for a randomised controlled trial*.* *Trials* **18**, 194.

38. **Landstedt E, Brydsten A, Hammarstrom A, Virtanen P, Almquist YB** (2016) The role of social position and depressive symptoms in adolescence for life-course trajectories of education and work: a cohort study*.* *BMC Public Health* **16**, 1169.

39. **Larson S, Chapman S, Spetz J, Brindis CD** (2017) Chronic Childhood Trauma, Mental Health, Academic Achievement, and School-Based Health Center Mental Health Services*.* *J Sch Health* **87**, 675-686.

40. **Law WC, McClanahan R, Weismuller PC** (2017) Depression Screening in the School Setting: Identification of the Depressed Adolescent*.* *NASN Sch Nurse* **32**, 364-370.

41. **Le Hellard S, Wang Y, Witoelar A, et al.** (2017) Identification of Gene Loci That Overlap Between Schizophrenia and Educational Attainment*.* *Schizophr Bull* **43**, 654-664.

42. **Leach LS, Butterworth P** (2012) The effect of early onset common mental disorders on educational attainment in Australia*.* *Psychiatry Res* **199**, 51-7.

43. **Lee J, Green MF, Calkins ME, et al.** (2015) Verbal working memory in schizophrenia from the Consortium on the Genetics of Schizophrenia (COGS) study: the moderating role of smoking status and antipsychotic medications*.* *Schizophr Res* **163**, 24-31.

44. **Lees J, Michalopoulou PG, Lewis SW, et al.** (2017) Modafinil and cognitive enhancement in schizophrenia and healthy volunteers: the effects of test battery in a randomised controlled trial*.* *Psychol Med* **47**, 2358-2368.

45. **Li M, Zhong N, Lu S, et al.** (2016) Cognitive Behavioral Performance of Untreated Depressed Patients with Mild Depressive Symptoms*.* *PLoS One* **11**, e0146356.

46. **Liu Y, Kaaya S, Chai J, et al.** (2017) Maternal depressive symptoms and early childhood cognitive development: a meta-analysis*.* *Psychol Med* **47**, 680-689.

47. **Lyon AR, Maras MA, Pate CM, Igusa T, Vander Stoep A** (2016) Modeling the Impact of School-Based Universal Depression Screening on Additional Service Capacity Needs: A System Dynamics Approach*.* *Adm Policy Ment Health* **43**, 168-88.

48. **Mahableshwarkar AR, Zajecka J, Jacobson W, Chen Y, Keefe RS** (2015) A Randomized, Placebo-Controlled, Active-Reference, Double-Blind, Flexible-Dose Study of the Efficacy of Vortioxetine on Cognitive Function in Major Depressive Disorder*.* *Neuropsychopharmacology* **40**, 2025-37.

49. **McGurk SR, Mueser KT, Covell NH, et al.** (2013) Mental health system funding of cognitive enhancement interventions for schizophrenia: summary and update of the New York Office of Mental Health expert panel and stakeholder meeting*.* *Psychiatr Rehabil J* **36**, 133-45.

50. **McIntyre RS, Lee Y** (2016) Cognition in major depressive disorder: a 'Systemically Important Functional Index' (SIFI)*.* *Curr Opin Psychiatry* **29**, 48-55.

51. **McKendry Y, Ownsworth T, Bettens GF** (2014) Comparing accuracy of knowledge of functional effects of schizophrenia and brain injury*.* *Psychiatry Res* **219**, 225-7.

52. **McLeod GF, Horwood LJ, Fergusson DM** (2016) Adolescent depression, adult mental health and psychosocial outcomes at 30 and 35 years*.* *Psychol Med* **46**, 1401-12.

53. **McLeod JD, Uemura R, Rohrman S** (2012) Adolescent mental health, behavior problems, and academic achievement*.* *J Health Soc Behav* **53**, 482-97.

54. **Mekonnen H, Medhin G, Tomlinson M, et al.** (2018) Impact of maternal common mental disorders on child educational outcomes at 7 and 9 years: a population-based cohort study in Ethiopia*.* *BMJ open* **8**, e018916.

55. **Melnyk BM, Amaya M, Szalacha LA, et al.** (2015) Feasibility, Acceptability, and Preliminary Effects of the COPE Online Cognitive-Behavioral Skill-Building Program on Mental Health Outcomes and Academic Performance in Freshmen College Students: A Randomized Controlled Pilot Study*.* *J Child Adolesc Psychiatr Nurs* **28**, 147-54.

56. **Melvin GA, Dudley AL, Gordon MS, et al.** (2017) Augmenting cognitive behavior therapy for school refusal with fluoxetine: a randomized controlled trial*.* *Child Psychiatry Hum Dev* **48**, 485-497.

57. **Mojtabai R, Stuart EA, Hwang I, et al.** (2015) Long-term effects of mental disorders on educational attainment in the National Comorbidity Survey ten-year follow-up*.* *Soc Psychiatry Psychiatr Epidemiol* **50**, 1577-1591.

58. **Nadeau SE, Bowers D, Jones TL, et al.** (2014) Cognitive effects of treatment of depression with repetitive transcranial magnetic stimulation*.* *Cogn Behav Neurol* **27**, 77-87.

59. **Ness BM, Middleton MJ, Hildebrandt MJ** (2015) Examining the effects of self-reported posttraumatic stress disorder symptoms and positive relations with others on self-regulated learning for student service members/veterans*.* *J Am Coll Health* **63**, 448-458.

60. **O'shea DM, Fieo RA, Hamilton JL, et al.** (2015) Examining the association between late‐life depressive symptoms, cognitive function, and brain volumes in the context of cognitive reserve*.* *Int J Ger Psychiatry* **30**, 614-622.

61. **Oertel-Knöchel V, Mehler P, Thiel C, et al.** (2014) Effects of aerobic exercise on cognitive performance and individual psychopathology in depressive and schizophrenia patients*.* *Eur Arch Psychiatry Clin Neurosci* **264**, 589-604.

62. **Ontario HQ** (2017) Psychotherapy for Major Depressive Disorder and Generalized Anxiety Disorder: A Health Technology Assessment*.* *Ont Health Technol Assess Ser* **17**, 1.

63. **Panayiotou M, Humphrey N** (2018) Mental health difficulties and academic attainment: Evidence for gender-specific developmental cascades in middle childhood*.* *Dev Psychopathology* **30**, 523-538.

64. **Potter GG, McQuoid DR, Steffens DC** (2015) Appetite loss and neurocognitive deficits in late‐life depression*.* *Int J Ger Psychiatry* **30**, 647-654.

65. **Punamäki R-L, Paavonen J, Toikka S, Solantaus T** (2013) Effectiveness of preventive family intervention in improving cognitive attributions among children of depressed parents: A randomized study*.* *J Fam Psychol* **27**, 683.

66. **Roca M, López-Navarro E, Monzón S, et al.** (2015) Cognitive impairment in remitted and non-remitted depressive patients: A follow-up comparison between first and recurrent episodes*.* *Eur Neuropsychopharm* **25**, 1991-1998.

67. **Rosenheck R, Mueser KT, Sint K, et al.** (2017) Supported employment and education in comprehensive, integrated care for first episode psychosis: Effects on work, school, and disability income*.* *Schizophr Res* **182**, 120-128.

68. **Schirmbeck F, Mier D, Esslinger C, et al.** (2015) Increased orbitofrontal cortex activation associated with “pro-obsessive” antipsychotic treatment in patients with schizophrenia*.* *J Psychiatry Neurosci* **40**, 89.

69. **Seidman LJ, Cherkerzian S, Goldstein JM, et al.** (2013) Neuropsychological performance and family history in children at age 7 who develop adult schizophrenia or bipolar psychosis in the New England Family Studies*.* *Psychol Med* **43**, 119-131.

70. **Shaughnessy TM, Parker Jr FR, Hollenshead JH, Clottey EN, Rubin HW** (2017) Contemporary Data and Trends in the Economic Costs of Mental Disabilities*.* *Behav Sci Law* **35**, 162-177.

71. **Shearer J, McCrone P, Romeo R** (2016) Economic evaluation of mental health interventions: a guide to costing approaches*.* *Pharmacoeconomics* **34**, 651-664.

72. **Shilyansky C, Williams LM, Gyurak A, et al.** (2016) Effect of antidepressant treatment on cognitive impairments associated with depression: a randomised longitudinal study*.* *The Lancet Psychiatry* **3**, 425-435.

73. **Singal D, Brownell M, Chateau D, Ruth C, Katz LY** (2016) Neonatal and childhood neurodevelopmental, health and educational outcomes of children exposed to antidepressants and maternal depression during pregnancy: protocol for a retrospective population-based cohort study using linked administrative data*.* *BMJ open* **6**, e013293.

74. **Siriwardhana C, Pannala G, Siribaddana S, Sumathipala A, Stewart R** (2013) Impact of exposure to conflict, tsunami and mental disorders on school absenteeism: findings from a national sample of Sri Lankan children aged 12–17 years*.* *BMC public health* **13**, 560.

75. **Snell T, Knapp M, Healey A, et al.** (2013) Economic impact of childhood psychiatric disorder on public sector services in Britain: estimates from national survey data*.* *J Child Psychol Psychiatry* **54**, 977-985.

76. **Thomas KC, Stein GL, Williams CS, et al.** (2017) Fostering activation among Latino parents of children with mental health needs: An RCT*.* *Psychiatr Serv* **68**, 1068-1075.

77. **Vreeker A, Boks MP, Abramovic L, et al.** (2016) High educational performance is a distinctive feature of bipolar disorder: a study on cognition in bipolar disorder, schizophrenia patients, relatives and controls*.* *Psychol Med* **46**, 807-818.

78. **Wansink HJ, Drost RM, Paulus AT, et al.** (2016) Cost-effectiveness of preventive case management for parents with a mental illness: a randomized controlled trial from three economic perspectives*.* *BMC Health Serv Res* **16**, 228.

79. **Ward JB, Haan MN, Garcia ME, et al.** (2016) Intergenerational education mobility and depressive symptoms in a population of Mexican origin*.* *Ann Epidemiol* **26**, 461-466.

80. **Ward KM, Kraal AZ, Flowers SA, Ellingrod VL** (2017) Cardiovascular pharmacogenomics and cognitive function in patients with schizophrenia*.* *Pharmacotherapy* **37**, 1122-1130.

81. **Weisler RH, Ota A, Tsuneyoshi K, et al.** (2016) Brexpiprazole as an adjunctive treatment in young adults with major depressive disorder who are in a school or work environment*.* *J Affect Disord* **204**, 40-47.

82. **Zakopoulou V, Mavreas V, Christodoulides P, et al.** (2014) Specific learning difficulties: A retrospective study of their co morbidity and continuity as early indicators of mental disorders*.* *Res Dev Disabil* **35**, 3496-3507.

83. **Zhong N, Jiang H, Wu J, et al.** (2013) Reliability and validity of the CogState battery Chinese language version in schizophrenia*.* *PLoS One* **8**, e74258.

## Supplementary File 3. Transformation of the draft list of ICBs in the education sector based on the comments of the experts

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| **Draft list of ICBs in the education sector** | **Sources** | **Summary of experts' comments** | **Final list of ICBs in the education sector** |
| Special education services | Drost et al (2013) | Special education can be provided in regular schools/classrooms but also in special education schools | Special education schoolAdditional education services/assistance in a regular school |
| Learning therapy  | Grey literature Austrian online portal for career planning: https://www.bic.at/berufsinformation.php?brfid=2195German guideline : Leitfaden zur Feststellung sonderpädagogischen Förderbedarfs an Berliner Schulen (2015) https://www.berlin.de/sen/bildung/schule/.../leitfaden\_foerderbedarf-2017\_nov15.pdf | Confused with learning diagnosis, must be clearly definedLearning support when it is organised in school and learning therapy when outside school | Educational therapy |
| Home education  | Drost et al (2013) | Not provided only by parents, could also be by teachers/tutors | Home education |
| School-based health promotion interventio ns | Peer-reviewed literature Bowman, S., McKinstry, C., & McGorry, P. (2017). Youth mental ill health and secondary school completion in Australia: time to act. Early intervention in psychiatry, 11(4), 277-289. Deady, M., Choi, I., Calvo, R. A., Glozier, N., Christensen, H., & Harvey, S. B. (2017). eHealth interventions for the prevention of depression and anxiety in the general population: a systematic review and meta-analysis. BMC psychiatry, 17(1), 310. Kuyken, W., Nuthall, E., Byford, S., Crane, C., Dalgleish, T., Ford, T., ... & Williams, J. M. G. (2017). The effectiveness and cost-effectiveness of a mindfulness training programme in schools compared with normal school provision (MYRIAD): study protocol for a randomised controlled trial. Trials, 18(1), 194. Law, W. C., McClanahan, R., & Weismuller, P. C. (2017). Depression Screening in the School Setting: Identification of the Depressed Adolescent. NASN school nurse, 32(6), 364-370. Lyon, A. R., Maras, M. A., Pate, C. M., Igusa, T., & Vander Stoep, A. (2016). Modeling the impact of school-based universal depression screening on additional service capacity needs: A system dynamicsapproach. Administration and Policy in Mental Health and Mental Health Services Research, 43(2), 168-188. Ball, A., Rittner, B., Chen, Y. L., & Maguin, E. (2018). Impact of individualized education plans on academic success of youth with early onset schizophrenia. Journal of evidence-informed social work, 15(5), 534-549. |   | Excluded as it belongs to the health care sector rather than the education sector |
| Liaison teacher  | Grey literatureGerman federal ministry website: Behörde für Schule und berufsbildung Hamburg, Information Bildungs- und Beratungszentrum Pädagogik bei Krankheit und Autismus. https://www.hamburg.de/bsb/bbz-einfuehrung/ | Suggested alternative namings “therapeutic pedagogy teacher” or “mentor” | Included in "additional education services/assistance in a regular school" based on re-clustering |
| Compensation for disadvantages  | Grey literature Website private school counselling institution in Lower Austria: Helpdesk für Lehrer/innen verhaltensauffälliger Schüler/innen, http://helv.ph-noe.ac.at/index.php?id=22&tx\_ttnews%5Btt\_news%5D=625&cHash=1f437c496aa4d2d9c8904537a4f460b5German Federal Ministry website: Behörde für Schule und berufsbildung Hamburg, Information Bildungs- und Beratungszentrum Pädagogik bei Krankheit und Autismus. https://www.hamburg.de/bsb/bbz-einfuehrung/ | Special support facilities/differentiation in classroom | Included in "additional education services/assistance in a regular school" based on re-clustering |
| Special needs diagnostics  | Grey literature German guideline :Leitfaden zur Feststellung sonderpädagogischen Förderbedarfs an Berliner Schulen (2015), https://www.berlin.de/sen/bildung/schule/.../leitfaden\_foerderbedarf-2017\_nov15.pdf | In the UK referred to as Special Education Needs assessment (SEN) or Education, Health and Care (EHC) assessmentDifference with “learning therapy“ is not clear | Special needs diagnostics |
| Counseling of legal guardians  | Grey literature Austrian guideline of the Ministry of education: Bundesministerium für Bildung, Mobbing an Schulen, 2017,https://www.saferinternet.at/fileadmin/categorized/Materialien/Mobbing\_an\_Schulen\_Leitfaden\_BMB.pdfGerman guideline :Leitfaden zur Feststellung sonderpädagogischen Förderbedarfs an Berliner Schulen (2015),https://www.berlin.de/sen/bildung/schule/.../leitfaden\_foerderbedarf-2017\_nov15.pdf | No comments were given | Counselling of legal guardians |
| Student counselling  | Grey literature Austrian guideline of the Ministry of education: Bundesministerium für Bildung, Mobbing an Schulen, 2017,https://www.saferinternet.at/fileadmin/categorized/Materialien/Mobbing\_an\_Schulen\_Leitfaden\_BMB.pdfGerman national guideline :Leitfaden zur Feststellung sonderpädagogischen Förderbedarfs an Berliner Schulen (2015), <https://www.berlin.de/sen/bildung/schule/.../leitfaden_foerderbedarf-2017_nov15.pdf>Dutch costing manual: Drost, R. M., Paulus, A. T. G., Ruwaard, D., & Evers, S. M. A. A. (2014). Handleiding intersectorale kosten en baten van (preventieve) interventies: Classificatie, identificatie en kostprijzen. Maastricht University, Department of Health Services Research. | Can also take place during school, and not only for students with performance difficulties | Student counselling |
| Temporary study group  | Grey literatureGerman unpublished article:Senatsverwaltung für Gesundheit, Soziales und Verbarucherschutz Berlin & Senatsverwaltung für Bildung, Jugend und Sport Berlin (2003) Kooperation von Kinder- und Jugendpsychiatrie, Jugendhilfe und Schule. https://www.efb-berlin.de/wp-content/uploads/pdf\_fachleute/kooperation\_psychiatrie\_jugendhilfe\_schule.pdf | Might also be not temporary, study support group, disability learning group | Included in "additional education services/assistance in a regular school" based on re-clustering |
| Social and educational therapy boarding school  | Grey literature German school website: http://www.weisse-villa-harz.de/ | Special needs boarding school, residential school therapeutic boarding school | Special education school |
| Night school  | Grey literature German school website: http://hasa.grone-netzwerk.de/?gclid=EAIaIQobChMIhqGJ1cXJ3QIVDud3Ch3\_sAYGEAAYAyAAEgIX0fD\_BwE | Could also take place in the eveningOnly for adults, while the focus of this study is on younger students | Excluded, as this facility is meant for adults rather than children and adolescents |
| Attendance officer  | Grey literature Dutch costing manual: Drost, R. M., Paulus, A. T. G., Ruwaard, D., & Evers, S. M. A. A. (2014). *Handleiding intersectorale kosten en baten van (preventieve) interventies: Classificatie, identificatie en kostprijzen*. Maastricht University, Department of Health Services Research. | Dealing with absenteeism is a regular task of schools, there are no special officers for this taskDoes not exist in some countries | Excluded |
| Student transport to special education facility | Should not be limited to travel to special education facilities, as transport can be provided to mainstream schools and is not necessarily only available for those with SEND. | Student transport to special education facility  |
| Student-related financing  | Special needs financing/premium, but might be related to regular school financing | Student-related financing |
| Change in school readiness  | Drost et al (2013) | Rather reduced | Reduced school readiness |
| Problems with school entry  | Drost et al (2013) | Rarely occurs | Problems with school entry |
| Learning disabilities  | Drost et al (2013) | Impaired development of learning skills | Learning disabilities |
| Cognitive deficits | Drost et al (2013) | Fall under learning disability | Included in "learning disabilities" based on re-clustering |
| Low school adaptation/competence  | Drost et al (2013) | “Low” 🡪 “reduced”“Adaptation” and “competence” should not be grouped together | Reduced school adaptation, Reduced school competencebased on re-clustering |
| Low school participation/engagement | Drost et al (2013) | “Participation“ and “engagement” should not be grouped togetherCan also be low school motivation or classroom participation | Reduced school participation, Reduced school engagementbased on re-clustering |
| Low school attainment/productivity/performance  | Drost et al (2013) | “Attainment”, “productivity” and “performance” are different terms | Reduced school attainment, Reduced school productivity, Reduced school performancebased on re-clustering |
| Grade retention  | Drost et al (2013) | Suggest 're-sit of the school year'Rare | Grade retention |
| Disrupted school experience  | Drost et al (2013) | Very broad term | Negative school experiences |
| Teacher-student conflicts  | Drost et al (2013) | No comments were given | Included in "negative school experiences" based on re-clustering |
| School droupout/pre-mature leave  | Drost et al (2013) | Leaving school without qualifications | Included in "reduced school attainment" based on re-clustering |
| Indirect effect of premature school leave/drop-out  | Grey literatureDutch societal cost-benefit analysis in the education sector: KBA onderwijs en jeugdwerkeloosheid, <https://www.cpb.nl/sites/default/files/publicaties/download/cpb-notitie-maatschappelijke-kosten-baten-analyses-het-onderwijs.pdf>  | Can also include positive effects | Excluded as this ICB occurs in the labour sector |
| (Social) reintegration  | Grey literatureGerman federal ministry website: Behörde für Schule und berufsbildung Hamburg, Information Bildungs- und Beratungszentrum Pädagogik bei Krankheit und Autismus. https://www.hamburg.de/bsb/bbz-einfuehrung/ | Might be too broad, better call it school re-integration | School (re-)integration |
| Inclusion  | Grey literature German federal ministry website: Behörde für Schule und berufsbildung Hamburg, Information Bildungs- und Beratungszentrum Pädagogik bei Krankheit und Autismus. https://www.hamburg.de/bsb/bbz-einfuehrung/ | Unsure whether "inclusion" as a policy is limited to students with social disabilities | Excluded as it is an antonym for discrimination  |
| Refusal of admission | Grey literature Dutch costing manual: Drost, R. M., Paulus, A. T. G., Ruwaard, D., & Evers, S. M. A. A. (2014). Handleiding intersectorale kosten en baten van (preventieve) interventies: Classificatie, identificatie en kostprijzen. Maastricht University, Department of Health Services Research. | Not permitted in the UK and Germany | Included in "reduced school attainment" based on re-clustering |
| Change in educational level  | “Fallback“Can also be upwards |
| Exemption from compulsory education  | Not possible when child is obliged by law to go to school |
| Talent development  | Grey literatureSocietal cost-benefit analysis of an educational concept “Broad School” (NL: Brede School): MKBA Brede School, <http://www.lpbl.nl/wp-content/uploads/2016/03/MKBA-Brede-school-2007.pdf> | Add “impaired“Perhaps skills/competence development would be betterNeeds to be clarified | Included in "reduced school competence" based on re-clustering |
| Discrimination  | Peer-reviewed literatureBowman, S., McKinstry, C., & McGorry, P. (2017). Youth mental ill health and secondary school completion in Australia: time to act. *Early intervention in psychiatry*, *11*(4), 277-289. | No comments were given | Included in "negative school experiences" based on re-clustering |
| Peer relations  | Peer-reviewed literatureKuyken, W., Nuthall, E., Byford, S., Crane, C., Dalgleish, T., Ford, T., ... & Williams, J. M. G. (2017). The effectiveness and cost-effectiveness of a mindfulness training programme in schools compared with normal school provision (MYRIAD): study protocol for a randomised controlled trial. *Trials*, *18*(1), 194. Dodge, K. A., Bierman, K. L., Coie, J. D., Greenberg, M. T., Lochman, J. E., McMahon, R. J., ... & Conduct Problems Prevention Research Group. (2014). Impact of early intervention on psychopathology, crime, and well-being at age 25. *American journal of psychiatry*, *172*(1), 59-70. Campbell, R., & Riggs, S. A. (2015). The role of psychological symptomatology and social support in the academic adjustment of previously deployed student veterans. *Journal of American College Health*, *63*(7), 473-481. Bowman, S., McKinstry, C., & McGorry, P. (2017). Youth mental ill health and secondary school completion in Australia: time to act. *Early intervention in psychiatry*, *11*(4), 277-289. Betancourt, T. S., McBain, R., Newnham, E. A., Akinsulure-Smith, A. M., Brennan, R. T., Weisz, J. R., & Hansen, N. B. (2014). A behavioral intervention for war-affected youth in Sierra Leone: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(12), 1288-1297.Beecham, J. (2014). Annual research review: Child and adolescent mental health interventions: A review of progress in economic studies across different disorders. *Journal of Child Psychology and Psychiatry*, *55*(6), 714-732. Ball, A., Rittner, B., Chen, Y. L., & Maguin, E. (2018). Impact of individualized education plans on academic success of youth with early onset schizophrenia. *Journal of evidence-informed social work*, *15*(5), 534-549.  | Include the word negative in the title, “negative peer relations”  | Included in "negative school experiences" based on re-clustering |
| Suspension | Grey literature Austrian law Bundesgesetz über die Ordnung von Unterricht und Erziehung in den im Schulorganisationsgesetz geregelten Schulen (Schulunterrichtsgesetz - SchUG), § 49https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10009600Ducth unpublished MSc thesis | Temporary/permanent exclusion  | Included in "reduced school attainment" based on re-clustering |
| Negative feelings about school  | Peer-reviewed literatureHawkrigg, S., & Payne, D. N. (2014). Prolonged school non-attendance in adolescence: a practical approach. *Archives of disease in childhood*, *99*(10), 954-957. | Negative feelings are about more than just dislike | Included in "negative school experiences" based on re-clustering |
| Classroom behaviour  | Peer-reviewed literatureBetancourt, T. S., McBain, R., Newnham, E. A., Akinsulure-Smith, A. M., Brennan, R. T., Weisz, J. R., & Hansen, N. B. (2014). A behavioral intervention for war-affected youth in Sierra Leone: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(12), 1288-1297. Bowman, S., McKinstry, C., & McGorry, P. (2017). Youth mental ill health and secondary school completion in Australia: time to act. *Early intervention in psychiatry*, *11*(4), 277-289.  | Relates to peer relationsNot clear who it is referred to a student or a class as a whole | Disruptive school behavior |

## Supplementary File 4. Descriptive information about the expert survey

|  |  |  |  |
| --- | --- | --- | --- |
| **Country** | **Number of experts** | **Professional background** | **Number of responses per question (Q)** |
| **Researcher** | **Educational expert** | **Q1** | **Q2** | **Q3** |
| **Austria** | 4 |  | 4 | 4 | 4 | 4 |
| **Germany** | 1 | Unknown | 1 | 1 | 1 |
| **Hungary** | 1 | 1 |  | 1 | 1 | 0 |
| **Spain** | 3 |  | 3 | 3 | 3 | 3 |
| **Netherlands** | 3 | 3 |  | 3 | 3 | 2 |
| **UK** | 2 | 2 |  | 2 | 1 | 1 |
| **Total** | **14** | **6** | **7** | **14** | **13** | **11** |