**S4 Appendix**: Overview of descriptors identified in the included studies categorized in the five knowledge themes (*clinical practice knowledge, implementation / improvement practice knowledge, knowledge about the local context, knowledge about supporting change processes, knowledge about facilitating evidence-based practice in general*). The publication IDs indicate the corresponding articles in which the descriptors were identified.

| Clinical practice<br><br>*ISPs have knowledge about…* | Publication references | Number of publications |
|---|---|---|
| *the intervention and its target population* | [48] [49] [54] [55] [57] [59] [60] [61] [64] [65] [66] [67] [68] [70] [72] [73] [75] [79] [95] [96] [97] [99] [102] [103] [104] [106] [108] [109] [110] [111] [117] [119] [120] [122] [123] [124] | n = 36 |
| *the research in the clinical area* | [47] [48] [50] [51] [57] [66] [68] [69] [70] [71] [74] [95] [98] [103] [104] [105] [106] [109] [121] [122] | n = 20 |
| *the field (being clinically experienced and not a novice)* | [66] [78] [99] [106] [109] [110] [122] | n = 7 |
| *how to assess the needs of a target population and support intervention design* | [50] [57] [101] | n = 3 |
| *how to administer clinical tools* | [116] [117] | n = 2 |
| *the principles of sector administration* | [118] | n = 1 |

| Implementation / improvement practice<br><br>*ISPs have knowledge about…* | Publication IDs | Number of publications |
|---|---|---|
| specific improvement / implementation methods / approaches | [54] [57] [62] [68] [69] [80] [97] [109] [113] [115] [116] [117] [118] [123] | n = 14 |
| the principles of high-quality implementation | [50] [59] [101] [118] | n = 4 |
| the principles of high-quality | [66] [75] [104] [106] | n = 4 |

| | | |
|---|---|---|
| facilitation | | |
| one's own role as an implementation support practitioner | [77] [107] [116] [120] | n = 4 |
| how to guide implementation through appropriate educational materials | [49] [96] | n = 2 |
| an intervention's implementation model / standards and how to maintain these | [95] [96] | n = 2 |
| how to collect and utilize data for intervention design and implementation | [50] [101] | n = 2 |
| how to assess fidelity | [53] [63] | n = 2 |
| how to model and simulate change | [103] [106] | n = 2 |
| implementation strategies | [56] [66] | n = 2 |
| how to select and apply implementation strategies | [98] [104] | n = 2 |
| how to support program adaptation | [57] [59] | n = 2 |
| particular coaching models | [96] | n = 1 |
| coaching models and techniques | [119] | n = 1 |
| how to develop responses to changes in the implementation process | [95] | n = 1 |
| how to assess implementation barriers and plan their removal | [95] | n = 1 |
| how to teach ways to assess fidelity and how to enhance reliable fidelity measurement | [53] | n = 1 |
| how to read and interpret | [53] | n = 1 |

| fidelity data | | |
|---|---|---|
| how to provide feedback | [103] | n = 1 |
| principles of high-quality coaching | [103] | n = 1 |
| specific consultation interventions | [66] | n = 1 |
| how to make training active | [111] | n = 1 |
| how to provide performance feedback | [63] | n = 1 |
| principles of high-quality consultation | [79] | n = 1 |
| how to assess workflows | [71] | n = 1 |
| one's own implementation approach | [48] | n = 1 |
| how to evaluate | [117] | n = 1 |
| how to increase demand | [75] | n = 1 |
| how to support program sustainability | [57] | n = 1 |
| typical implementation barriers related to EBP implementation | [57] | n = 1 |
| tools that can support implementation processes (planning templates, measures) | [57] | n = 1 |
| how to collect data | [70] | n = 1 |
| the principles of high-quality evaluation | [114] | n = 1 |
| implementation science | [118] | n = 1 |

| The local context  *ISPs have knowledge about…* | Publication IDs | Number of publications |
|---|---|---|
| organizational structures and | [57] [78] [95] [107] [108] [109] [115] [121] | n = 9 |

| | | |
|---|---|---|
| sensitivities | [125] | |
| local conditions | [58] [66] [69] [71] [119] [122] | n = 6 |
| the local service system | [120] [122] [125] | n = 3 |
| systems used | [71] [122] | n = 2 |
| local practice issues | [107] [116] | n = 2 |
| local policy priorities | [107] [108] | n = 2 |
| how an implementation unfolds locally | [95] [96] | n = 2 |
| local funding structures | [124] | n = 1 |
| local performance | [122] | n = 1 |
| local policies and practices | [47] | n = 1 |
| organizational needs | [107] | n = 1 |
| local constraints | [106] | n = 1 |
| the outer setting | [121] | n = 1 |
| hierarchies, influencers | [52] | n = 1 |
| local key players | [66] | n = 1 |
| how to integrate implementation activities into existing organizational structures | [53] | n = 1 |
| the range of organizations in which an intervention is implemented | [49] | n = 1 |
| parallel implementation initiatives | [95] | n = 1 |

| Supporting change processes<br><br>*ISPs have knowledge about…* | Publication IDs | Number of publications |
|---|---|---|
| how to train | [75] [114] [116] [118] [123] | n = 5 |
| how to effectively communicate | [66] [98] [100] | n = 3 |

| | | |
|---|---|---|
| how to lead / facilitate groups including participation in group processes, decision-making and conflict resolution | [72] [100] [124] | n = 3 |
| how to solve logistical issues | [103] [109] | n = 2 |
| principles of organizational change | [109] [118] | n = 2 |
| how to enhance skills required for change | [96] | n = 1 |
| ongoing / planned organizational change processes | [95] | n = 1 |
| how to plan and prepare | [60] | n = 1 |
| how to organize (e.g. meetings, collaborative processes) | [100] | n = 1 |
| how to manage time | [98] | n = 1 |
| small group learning approaches | [56] | n = 1 |
| how to lead processes | [106] | n = 1 |
| the principles of organizational / individual behavior change and how to maintain such change | [47] | n = 1 |
| tools and the practice of change processes | [47] | n = 1 |
| principles of high-quality project management | [120] | n = 1 |
| principles of organizational and/or leadership development, and organizational strategic planning | [57] | n = 1 |
| the principles of professional development | [118] | n = 1 |

| Facilitating EBP in general | Publication IDs | Number of publications |
|---|---|---|

| ISPs have knowledge about… | | |
|---|---|---|
| what characterizes (good) research | [56] [64] [101] [105] [106] | n = 5 |
| the key principles of EBP | [94] [106] [107] | n = 3 |
| knowledge translation | [48] [51] [98] | n = 3 |
| general principles of high-quality practice | [50] [74] [121] | n = 3 |
| how to source evidence | [101] [105] [106] | n = 3 |
| how to conduct an evaluation | [57] [104] | n = 2 |
| evidence synthesis | [56] | n = 1 |
| how to select an RSI | [59] | n = 1 |