Intellectual and Developmental Disabilities

Development of a Dutch training/education program for a healthy lifestyle of people with intellectual disabilities.
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23

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Abstract

Background: Individuals with intellectual disabilities (ID) need support from Direct Support Professionals (DSPs) to engage in a healthy lifestyle. However, literature shows DSPs feel insufficiently equipped to support a healthy lifestyle. Therefore, the aim of this study is to develop a theory-based program for DSPs to support physical activity and healthy nutrition for people with moderate to profound ID, and to design its evaluation. Method and design: The Intervention Mapping Protocol (IM) was followed to develop a theory-based program for DSPs. The program evaluation consists of process and feasibility evaluations. Conclusion: This study provided a theory-based program consisting of a training and education section with online and face-to-face components, to support DSPs in promoting health for people with ID.

Keywords: Design, theory-based health promotion, health education, professional, intellectual disability

51   **Development of a Dutch training/education program for a healthy lifestyle of people**

52   **with intellectual disabilities**

53   People with intellectual disabilities (ID) experience limitations both in intellectual and

54   adaptive functioning, in the following domains: conceptual, social, and practical adaptive

55   skills. Nowadays people with ID are classified according to their support needs, with a four

56   level system: mild, moderate, severe, and profound ID. This attention for the support needs

57   focuses on the capacity and development of people with ID. The support needs of people with

58   moderate to profound ID experience gives a comprehensive understanding of the degree of

59   ID (Schalock et al., 2021). People with moderate to profound ID need encouragement in

60   several domains, for example in language, motor skills, sensory, and in activities for daily

61   living (American Psychiatric Association, 2013; Schalock et al., 2021).

62   Individuals with ID exhibit physical inactivity (Gawlik et al., 2018; Hilgenkamp et al.,

63   2012; Van der Putten et al., 2016) and unhealthy food consumption (Koritsas & Iacono,

64   2016). This unhealthy lifestyle causes health issues like obesity, (Gawlik et al., 2018) and

65   cardiovascular risks (De Winter et al., 2012; Gawlik et al., 2018), and may have negative

66   impact on quality of life and participation (Bartlo & Klein, 2011; Heller et al., 2011).

67   Additionally, people with moderate to profound ID experience limitations in several other

68   domains, wherefore they need support in activities for daily living. As a consequence, they

69   are more at risk for an unhealthy lifestyle, because of their disabilities (Nakken & Vlaskamp,

70   2007). Individuals with moderate to profound ID who are living in residential facilities and/or

71   participate in day activity centers require support from direct support professionals (DSPs) to

72   optimize physical activity and healthy nutrition. DSPs play a significant role in providing a

73   health-supporting environment for this population (Kuijken et al., 2019).

74   Despite the importance of DSPs in health support, they indicate that they are not

75   sufficiently equipped to do so as they require additional knowledge and skills (Bodde & Seo,

76   2009; Bossink et al., 2017; Doherty et al., 2018; Hamzaid et al., 2018). Therefore, it is

77   necessary to tailor to the needs regarding competencies of DSPs and focus on the required

78   determinants in order to change their behavior (Bartholomew Eldredge et al., 2016). Theory-

79   based interventions can be beneficial for DSPs and are more likely to help them succeed, as

80   shown in the general population (Avery et al., 2015; Greaves et al., 2011; Michie et al.,

81   2009). However, theory-based interventions tailored to DSPs to support people with ID are

82   scarce (Steenbergen et al., 2017; Willems et al., 2017). To develop theory-based

83   interventions, the Intervention Mapping Protocol (IM) (Bartholomew Eldredge et al., 2016)

84   can be utilized as a systematic approach to guide the process of development. To meet the

85   need for theory-based interventions based on relevant determinants, the aim of this study is to

86   develop a program for DSPs to support physical activity and healthy nutrition for people with

87   moderate to profound ID, and to design its evaluation.

88   **Method and design**

89   The IM was followed in order to develop the intervention (Bartholomew Eldredge et

90   al., 2016; Van Schijndel-Speet et al., 2013) focused on DSPs who support people with

91   moderate to profound ID. IM consists of six increments: (1) Needs assessment, (2) Program

92   objectives, (3) Theory-based strategies, (4) Program plan, (5) Implementation, and (6)

93   Evaluation (Bartholomew Eldredge et al., 2016). These increments are described in the

94   following paragraphs.

95   **Needs assessment**

96   Describing the needs of DSPs who support people with ID, literature and results from

97   two previous studies were utilized by the authors.

98   Literature research shows firstly that it is important to focus on healthy lifestyle

99   interventions for people with moderate to profound ID. People with moderate to profound ID

100   often do not have a healthy lifestyle regarding physical activity and healthy nutrition (Dairo

101   et al., 2016; Humphries et al., 2009; Van der Putten et al., 2016), they have obesity or

102   malnutrition (Gawlik et al., 2018; Hsieh et al., 2014; Koritsas & Iacono, 2016) and more

103   health problems (Emerson & Baines, 2011; World Health Organization, 2011), like diabetes

104   and hypertension (De Winter et al., 2012; Van Timmeren et al., 2017). Secondly, literature

105   shows that the focus of these interventions should be on DSPs of people with moderate to

106   profound ID (Buntinx & Schalock, 2010; Kuijken et al., 2019), because of the support they

107   provide in daily life for healthy lifestyle behavior.

108   In addition to the literature research, results of an interview study conducted by the

109   authors demonstrated that the following five domains were most frequently mentioned by

110   DSPs as support needs: (1) Environmental Context and Resources, (2) Social/Professional

111   Role and Identity, (3) Social influences, (4) Skills, and (5) Knowledge (Anonymous et al.,

112   n.d.). DSPs indicated the following specific support needs within these domains: (1) dealing

113   with the different seasons and having the time to support physical activity and healthy

114   nutrition, (2) addressing norm/values and the autonomy of those individuals with ID, (3)

115   social support from family/parents/others and working together with colleagues, (4)

116   competence/skills to motivate people with ID and correlate this with their individual needs,

117   and (5) knowledge about physical activity and nutrition specific guidelines for people with

118   ID. The DSPs, who have an important influence on the healthy life of people with ID, are not

119   sufficiently equipped to support them: DSPs need skills, knowledge, and confidence for

120   supporting a healthy lifestyle (Kuijken et al., 2019; Temple & Walkley, 2007). In this

121   previous study, DSPs indicated that the program should focus on all three elements of the

122   COM-B system with the following five determinants: Knowledge and Skills (Capability);

123   Social Influences, Environmental Context, and Resources (Opportunity); and

124   Social/Professional Role and Identity (Motivation). In the COM-B system, capability is

125   defined as the person's psychological and physical capacity to perform an activity;

126   Opportunities are external factors outside the individual that influence the performed

127   behavior; and Motivation is the process that energises and directs a person's behavior (Cane

128   et al., 2012). The second study revealed information about the current use of Behavior

129   Change Techniques (BCTs) (Michie et al., 2011) in daily practice to support a healthy

130   lifestyle (Anonymous et al., n.d.). This observation study indicated that DSPs employ BCTs

131   in daily practice. Nevertheless, DSPs indicated that they lack skills to motivate and

132   encourage people with ID (Anonymous et al., n.d.). Because of the support need of DSPs,

133   awareness of the use of BCTs would be necessary to overcome this need and make DSPs

134   more confident to motivate people with ID.

135   In addition, DSPs were asked about the desired mode of delivery of the program.

136   According to them, they prefer a team program that is tailored to the population with which

137   they work. They also suggest involving experts who have experience with people with ID to

138   deliver the program. In addition, an interactive practical approach for the program would be

139   important, e.g., with example cases and short videos. Furthermore, the program should have a

140   sustainable character. Final points of attention would be a positive approach and minimal

141   time investment.

142   **Program objectives**

143   The overall program objective was formulated as: supporting DSPs in terms of the

144   skills required to be able to encourage people with moderate to profound ID to engage in

145   physical activity and healthy nutrition. In order to achieve the program objective, the program

146   was focused on the five domains that emerged from the needs assessment as described in the

147   first step of IM (Anonymous et al., n.d.; Anonymous et al., n.d.) and on changeable

148   determinants focused on DSPs. Table 1 provides an overview of the theory and the support

149   needs that are components of the program. The program focused on improving Capability

150   (Knowledge and Skills), Opportunity (Social Influences, and Environmental Context, and

151   Resources), and Motivation (Social/Professional Role and Identity) of DSPs (Cane et al.,

152   2012).

153

154   [Insert Table 1: Overview of theory and needs assessment/program components – here]

155

156   The performance objectives were composed based on the program components.

157   Change objectives were subsequently formulated to show what participants need to learn or

158   change in order to achieve the performance objective. Table 2 depicts an overview of the

159   performance and change objectives.

160

161   [Insert Table 2: COM-B component, Determinants, Performance objectives, Change

162   objectives, and Practical strategies - here]

163

164   In order to meet the performance objectives, six BCTs (32; Anonymous et al., n.d.)

165   were selected. Three BCTs were indicated in earlier research as being applicable for people

166   with mild ID (BCT 9: set graded tasks, 12: prompt rewards contingent on effort or progress

167   towards behavior, 26: prompt practice) (Willems et al., 2019); two BCTs were most

168   frequently employed by DSPs (BCT 19: provide feedback on performance, 21: provide

169   instruction on how to perform the behavior) (Anonymous et al., n.d.); and one BCT (BCT

170   24a: environmental restructuring) was added specifically for individuals with severe to

171   profound ID (Anonymous et al., n.d.). The selected BCTs for the program are accommodated

172   in the 'Skills' determinant of the program.

173   **Theory-based strategies**

174   As described in the above paragraphs, the content of this theory-based program was

175   based on the Theoretical Domains Framework (TDF), related to the COM-B system (Cane et

176   al., 2012; Michie et al., 2005), and BCTs (Michie et al., 2011). To improve the support of

177   DSPs, they have to change their behavior. The TDF and COM-B system are evidence based

178   methods to change professional support (Phillips et al., 2015). The domains of the TDF are

179   related to the COM-B system, a complementary theory for changing behavior, with three

180   components (Capability, Opportunity, and Motivation). This system is designed to

181   understand interlocking determinants of behavior in order to devise theory-based

182   interventions (Cane et al., 2012). This theoretical system supports intervention development

183   by selecting the components that are required for behavior change in order to achieve the

184   goals of the intervention. From the needs assessment, all three parts of the COM-B system

185   were addressed to change the behavior of DSPs. Therefore, the program focuses on the

186   capacity of DSPs, external factors outside the DSPs, and the motivation of DSPs in order to

187   achieve the program goal. BCTs were used in the TDF skills component, whereas DSPs

188   mentioned the need for motivating people with ID to healthy lifestyle behavior. These BCTs

189   can be employed to support a healthy lifestyle (Michie et al., 2011).

190   Due to the educational character of the intervention, the mode of delivery of the

191   program was based on Kolb's theory of Learning Styles in order to modify the targeted

192   determinants and effective learning of DSPs. Kolb's theory connects the learning style of the

193   DSPs to their daily practice and encourages students' active participation with the following

194   cycle: experiencing in practice, reflecting on the process, thinking about relations in acting,

195   and acting in practice. These learning styles were validated and applied in several studies in

196   diverse fields (D'Amore et al., 2012; Kolb & Kolb, 2009). According to Kolb and Kolb

197   (Kolb & Kolb, 2009), knowledge is gained from experience. DSPs are able to learn new

198   things related to the program components from what they experience in daily practice.

199   Therefore, learning in practice, knowledge exchange, and online components were important

200   for the development of the program. Informal learning in networks (Wenger et al., 2011)

201   appeared in the program from co-creation on the work floor. DSPs discussed daily issues,

202   gathered new ideas from colleagues in informal talks, and were prompted by other colleagues

203   to learn about interesting new developments. This is referred to as social learning, i.e., a

204   method of informal learning in which social networks are used to gather new knowledge

205   (Wenger et al., 2011). Important assumptions in the development of the program included

206   working cohesively in learning networks, formal and informal learning, leadership, and

207   reflection of the learning process. Table 2 provides an overview of the change objectives and

208   practical strategies of the program related to the determinants.

209   **Program plan**

210   The five determinants from the needs assessment were the foundation of the program

211   plan. One of these five determinants (Knowledge) was transferred online. The remaining four

212   determinants (Social/Professional Role and Identity, Skills, Social Influences, and

213   Environmental Context and Resources) were addressed in three face-to-face sessions. The

214   mode of delivery of the program was based on the needs assessment where DSPs indicated

215   they prefer an interactive team program with experts. Because of the practical feasibility of

216   the program (time investment), the knowledge component was offered online. The

217   components of the program for DSPs were as follows:

218   1. An e-learning module to increase knowledge and awareness of physical activity

219   and healthy nutrition for people with moderate to profound ID.

220   2. Three sessions of two hours each with the following themes:

221   -   Social/Professional Role and Identity,

222   -   Skills (BCTs), and

223   -   Social Influences, and Environmental Context, and Resources.

224   The content of the program was developed based on the needs assessment from this study,

225   and the Dutch guidelines for physical activity and healthy nutrition (Gezondheidsraad, 2015,

226   2017; KenniscentrumSport, n.d.; Weggemans et al., 2018). During the face-to-face sessions,

227   DSPs bring in their own example cases and emphasis was placed on structural attention of

228   lifestyle and sustainability. The face-to-face sessions were performed by two trainers, of

229   which one trainer from the location where the program was implemented. See table 3 for the

230   preparation and content of the program. In order to transfer the experience from the program

231   to daily practice, DSPs conducted practical assignments between the sessions within the team

232   in which they reflected on specific situations and their performance, discussed the situation

233   with a colleague, thought about what they wanted to change in the situation, and

234   experimented with the new behavior in practice.

235

236   [Insert Table 3: Detailed description of the program for Direct Support Professionals - here]

237

238   In order to facilitate factors improving feasibility and connection to daily practice, the

239   ideas of experts were collected during the program development. The first author made the

240   first draft of the program, which was provided with feedback at several times by the research

241   team via e-mail and in-person, people with ID and their proxies in-person, allied health care

242   professionals via e-mail, DSPs via e-mail and in-person, student in-person, and teachers from

243   the university of applied sciences and from senior secondary vocational education via e-mail

244   and in-person. In an early stage, the following experts contributed to the development of the

245   program: behavioral scientists (n=2), physiotherapists (n=2), professionals in movement

246   education (n=3), dieticians (n=3), and a speech therapist (n=1). These experts checked the

247   program components. The content of the e-learning was developed in collaboration with: a

248   physiotherapist (n=1), professionals in movement education (n=3), dieticians (n=4), and

249   speech therapists (n=2). The program manual was written in collaboration with education

250   developers and a trainer/coach experienced in motivating within the priority population.

251   Furthermore, a group discussion with people with ID and their proxies was held to adapt the

252   program to daily practice. Additionally, during the development of the e-learning, DSPs (who

253   did not receive the program), students, and a teacher of senior secondary vocational education

254   were invited to provide feedback at three different times. A trainer/coach experienced in

255   motivating within the priority population also offered feedback on the e-learning at the third

256   feedback moment. The feedback was focused on linking and testing scientific and practical

257   knowledge of the program (Van Den Driessen Mareeuw et al., 2015).

258   **Implementation**

259   Within collaboration between care providers for people with ID, managers selected

260   four teams to participate in the program that included two teams in the north and two in the

261   center of the Netherlands (DSPs: n=32, people with ID: n=24). Two teams were employed at

262   living facilities, one at a day activity centre, and one in a setting in which living and day

263   activities are integrated for people with moderate to profound ID. Three teams worked at a

264   residential facility, and one team was located in a small community home. All of the teams

265   had one contact person (a team member or coordinator of the team) to plan the program

266   components for the team.

267   For a successful implementation of the program, various stakeholders (e.g., DSPs, the

268   trainers, educationalists, and experts) were involved during the program and its development.

269   This involvement of stakeholders created a connection to daily practice and the

270   implementation context. The e-learning was implemented in collaboration with the technical

271   staff of the involved care providers. Prior to beginning the face-to-face sessions, a joint

272   meeting with the trainers was held to coordinate the sessions. Subsequent to each session,

273 brief contact occurred with the trainers regarding the course. The first author was also present

274 at one face-to-face session of each team. During the sessions, the author observed whether the

275 meetings were conducted as intended. Before and during the program, the implementation

276 was discussed with the managers and contact persons of the involved care providers.

277

278 **Evaluation**

279 The evaluation consists of process (Linnan & Steckler, 2002) and feasibility

280 evaluations (Orsmond & Cohn, 2015). A mixed method design will be utilized to conduct the

281 evaluations.

282 *Process*

283 In the process evaluation, the following components will be reported: context, reach,

284 dose delivered, dose received, fidelity, and recruitment, according to Linnan and Steckler

285 (2002).

286 *Feasibility*

287 The feasibility objectives are the following: evaluation of recruitment capacity,

288 evaluation of data collection process, acceptability/suitability of the program,

289 implementation, and the preliminary results (Orsmond & Cohn, 2015) (see Figure 1).

290

291 [Insert Figure 1. Design for preliminary results - here]

292

293 The primary outcomes (which are part of the preliminary results of the feasibility

294 study) are the influence of the program on the DSPs (n=32) measured by the attitude, goal

295 achievement (performance and change objectives), and application in practice (performance

296 and change objectives). The attitude of DSPs will be measured at baseline, one week after,

297 and again three months after the last program session with an attitude questionnaire

298   (Steenbergen et al., n.d.). This attitude questionnaire consists of six items where DSPs can

299   reflect on their Capability (Knowledge and Skills), Opportunity (Social Influences, and

300   Environmental Context, and Resources), and Motivation (Social/Professional Role and

301   Identity) for supporting a healthy lifestyle of people with ID, which are the program

302   objectives. The goal achievement of the program will be measured one week after the last

303   program session with a questionnaire for DSPs, and the trainers will reflect on the goal

304   achievement after each session. The application in practice will be measured during the

305   program with practical assignments and then three months after the program with interviews

306   with DSPs. There will also be a questionnaire for managers of the participating teams one

307   week after the program. The first author checked the fidelity of the program by attending one

308   session at each care provider.

309   Secondary outcome measurements of the preliminary results are the level of physical

310   activity and the food intake of people with moderate to profound ID (n=24). Physical activity

311   will be measured with the Actigraph (Chow et al., 2016; Nordstrøm et al., 2013) for walking

312   respondents and the Actiwatch (Van Alphen et al., 2020) for non-walking respondents.

313   Additionally, DSPs will record the planned movement activities during the measurements of

314   physical activity. Food intake will be measured with food diaries for three days (Bastiaanse et

315   al., 2012). Food intake and physical activity of people with ID will be measured at baseline

316   and after three months following the last program session.

317   ***Planned analysis preliminary results***

318   The attitude of DSPs at baseline, one week after the program, and three months after

319   the program will be compared. To what extent the goals of the program have been achieved

320   will be reported on a scale from 0 to 5. During the program, the practical assignments of

321   DSPs will be evaluated on quality. A questionnaire completed by the managers of the

322   participating teams will be analysed regarding if support was provided for a healthy lifestyle

323   from DSPs in daily practice. In addition, interviews with DSPs will be analysed with a

324   conventional content analysis (Hsieh & Shannon, 2005) regarding the manner in which the

325   information learned from the program was applied in daily practice.

326   A number of comparisons will be made for this study of people with ID. Food diaries

327   before and after the program will be compared with the national health guidelines. The level

328   of activity of people with moderate to profound ID will be compared before and after the

329   program. In addition, the number of planned movement activities in daily programs will be

330   compared.

Discussion

332   This study resulted in a theory-based program consisting of a training and education

333   section for DSPs to support physical activity and healthy nutrition for people with moderate

334   to profound ID, and a design of its evaluation. DSPs were provided with knowledge, theory,

335   and suggestions for skills about physical activity and healthy nutrition for this population in

336   an online-learning module. In three face-to-face sessions, the following components were

337   discussed: (1) Social/Professional Role and Identity, (2) Skills: Behavioral Change

338   Techniques, (3) Social Influences and the Environmental Context and Resources. These

339   sessions were focused on behavioral change and collaboration in daily practice. The program

340   can be individually adapted to the learning needs of DSPs and the persons with ID that they

341   support.

342   IM guided the development of this theory-based program. This protocol was helpful

343   for organizing and carefully take the steps to develop an intervention, and make this

344   development transparent. The IM protocol was also used by other researchers to develop

345   interventions (Greaves et al., 2016; Van Schijndel-Speet et al., 2013), these studies can be an

346   example for developing more theory-driven interventions in a transparent manner. The

347   involvement of stakeholders to keep the intervention feasible for daily practice is a strength in

348   the developing process for applying the intervention. Besides IM, another framework for

349   developing interventions, the Behavior Change Wheel (Michie et al., 2011), was considered

350   to use, because it is in line with the theoretic approach of the TDF. Although the steps in both

351   frameworks are very similar, IM has a longer scientific history and is a more practical

352   instrument guiding through the development steps, and therefore, we opted for IM.

353   The content of this program is theoretically based by employing domains from the

354   TDF, related to the COM-B system (Cane et al., 2012) and BCTs for DSPs (Michie et al.,

355   2011), since behavior is related to different influencing factors. The BCTs were particularly

356   used by DSPs to motivate people with ID, because of the needs they indicated to do so. Due

357   to the educational character of this intervention, to change the behavior of DSPs, Kolb's

358   theory (Kolb & Kolb, 2009) was adapted for the mode of delivery of the program. In this

359   way, each aspect of the program was supported by the best suitable theoretical basis.

360   This program consisting of a training and education section is the first theory-based

361   intervention for DSPs tailored to people with moderate to profound ID. This program

362   provides what is lacking from the theory-based interventions for DSPs and for people with ID

363   to promote a healthy lifestyle (Steenbergen et al., 2017; Willems et al., 2017). An important

364   element in the program is the focus on physical activity and healthy nutrition whereas,

365   previously, most interventions in daily practice focused only on physical activity

366   (Steenbergen et al., 2017). Furthermore, this program is the first to use BCTs for people with

367   moderate to profound ID. With this inclusion, the usability of BCTs in this population can be

368   further explored.

369   A strength of this study is the close collaboration with daily practice, which facilitated

370   its implementation and adoption in order to contribute to a healthy lifestyle of people with ID

371   (Bartholomew Eldredge et al., 2016). This collaboration however can also be a limitation,

372   because there may be a certain degree of subjectivity and projection from an individual's

373   daily practice. As a consequence, the balance between an optimal program on one side, and

374   feasibility in practice on the other side may have shifted to practice, whereby for example

375   was chosen for a smaller number of sessions with shorter duration. However, we have tried to

376   overcome this possible limitation by the involvement of various experts and DSPs from

377   several care providers. For further evidence, this program requires a process evaluation and a

378   feasibility study.

379   **Conclusion**

380   In conclusion, this study provided a theory-based program consisting of a training

381   and education section with online and face-to-face components, to support DSPs in

382   promoting health for people with moderate to profound ID. The program can be individually

383   adapted to the learning needs of DSPs and the persons with ID who they support. The next

384   step will be to execute the process and feasibility evaluations of the program.

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578 **Table 1**

579 *Overview of theory and needs assessment/program components*

Behavior Change Wheel's COM-B system in relation to Theoretical Domains Framework determinants			Support needs from Direct Support Professionals/program components
Capability	Psychological	Knowledge	X
		Skills	X
		Memory, Attention and Decision processes	
		Behavioral regulation	
	Physical	Skills	X
Opportunity	Social	Social Influences	X
	Physical	Environmental Context and Resources	X
Motivation	Reflective	Social/Professional Role and Identity	X
		Beliefs about Capabilities	
		Optimism	
		Beliefs about Consequences	
		Intentions	
		Goals	
	Automatic	Social/Professional Role and Identity	X
		Optimism	
		Reinforcement	
		Emotion	

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583 **Table 2**

584 *COM-B component, Determinants, Performance objectives, Change objectives and Practical strategies*

COM-B component	Determinants	Performance objectives	Change objectives	Practical strategies
Opportunity	Environmental Context and Resources	-Direct Support Professionals (DSPs) pay attention to the available tools and time within the environment in order to support healthy food consumption and physical activity.	-The DSP can picture a situation in daily practice where he/she can pay attention to nutrition and physical activity.	Discussing example cases from daily practice with attention for experiencing, reflecting, thinking, and acting. Attention will be paid to: difficulties in practice, exchange expertise, practice, and sustainable attention for the topic. There will be application in daily practice with practical assignments.
	Social Influences	-DSPs use support (when possible) from family/parents/ others for a healthier lifestyle for people with ID.	-The DSP knows an example situation in which he/she can use support from family/parents/others for a healthy lifestyle. -DSPs work together for a better lifestyle (nutrition/physical activity) for people with ID.	
Motivation	Social/Professional Role and Identity	-DSPs are aware of their professional role regarding a healthy lifestyle and the provided support to people with ID.	-DSPs are aware of their own norms and values and the norms and values of colleagues and are aware of the autonomy of people with ID in relation to nutrition and physical activity and the	

COM-B component	Determinants	Performance objectives	Change objectives	Practical strategies
			influence of norms and values on the given support.	
Capability	Skills	-DSPs motivate/stimulate people with ID to eat healthy and perform physical activities by using Behavior Change Techniques (BCTs) and thereby satisfy the needs of people with ID.	-The DSP is able to use one BCT and knows a situation in which he/she can apply it.	
	Knowledge	-DSPs have knowledge about a healthy lifestyle for people with ID.	-DSPs have knowledge about healthy nutrition and the possible meaning of physical activity for people with moderate to profound ID. -DSPs know physical activities for people with moderate to profound ID. -DSPs know the benefits of healthy nutrition and physical activity for people with moderate to profound ID. -DSPs know practical tips (for example, how to stimulate/motivate people with ID) and recognize	Online information about healthy nutrition and physical activity for people with moderate to profound ID. This information will be tailored by filling in characteristics of persons with moderate or severe to profound ID from the own daily practice.

COM-B component	Determinants	Performance objectives	Change objectives	Practical strategies
			possibilities for healthy nutrition and physical activity for people with moderate to profound ID.	

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586   **Table 3**

587   *Detailed description of the program for Direct Support Professionals*

Theoretical strategy of session	Structure and description of the program		
	Session 1*: Social/Professional Role and Identity/ Autonomy of people with ID	Session 2: Skills (Behavior Change Techniques (BCTs))	Session 3: Social Influences, and Environmental Context, and Resources
Experience Reflecting Thinking	e-learning module: -Knowledge about healthy nutrition and physical activity for people with moderate to profound ID with interactive assignments (Gezondheidsraad, 2015, 2017; KenniscentrumSport, n.d.; Weggemans et al., 2018) -Additional tips, for example for recipes or physical activities for the target group -BCTs for motivating people with ID	Preparation of DSPs for the session: -Looking back at the e-learning for using BCTs -Discussing the goal for the team -Choosing example cases related to the theme	Preparation of DSPs for the session: -Discussing the goal for the team -Choosing example cases related to the theme

Theoretical strategy of session	Structure and description of the program		
	- Short assignments (to take to the training session) about the first steps to change in daily practice Preparation of Direct Support Professionals (DSPs) for the session: -Thinking about your own base for supporting people with ID -Reading: 10 professional dilemmas -Discussing the goal for the team -Choosing example cases related to the theme		
	Introduction	Introduction	Introduction
Reflecting	Feedback e-learning	Feedback assignment 1	Feedback assignment 2
	Set goal for team based on the theme	Set goal for team based on the theme	Set goal for team based on the theme
Experience Reflecting Thinking	Example cases from the team	-Video with BCTs -Example cases from the team	-Video with environmental context and resources -Example cases from the team

Theoretical strategy of session	Structure and description of the program		
Reflecting Thinking	Linking theme to example cases: what are the own norms/values in relation to the person with ID?	Linking theme to example cases: applying BCTs. Does this also align with what the person with ID wants and can do?	Linking theme to example cases: how to use environmental context, resources and social environment (e.g. involving family/relatives)? What does the person with ID want and how do you align with what he/she can?
Experience Reflecting Thinking	Exchange experience	Exchange experience	Exchange experience
Reflecting Thinking	Thinking and talking about: What do you encounter as a DSP when it comes to nutrition/physical activity, what gives you pause and how do you approach such a situation? -Role of autonomy of people with ID -Alignment with norms/values of people with ID, their wishes regarding healthy living, and support needs		Thinking and talking about: What do you encounter as a DSP when it comes to nutrition/physical activity, what gives you pause and how do you approach such a situation?

Theoretical strategy of session	Structure and description of the program		
Acting	Role play: practice with BCTs for people with ID		
Maintenance	Working together as a team for healthy lifestyle	Working together as a team for healthy lifestyle	Working together as a team for healthy lifestyle
Maintenance	Continuing attention for this theme and healthy lifestyle	Continuing attention for this theme and healthy lifestyle	Continuing attention for this theme and healthy lifestyle
Maintenance	Closing session: what do you take from this session to daily practice?	Closing session: what do you take from this session to daily practice?	Closing session: what do you take from this session to daily practice?
Experience Reflecting Thinking Acting	Assignment 1	Assignment 2	Assignment 3

*The topics of the training sessions are based on the Theoretical Domains Framework (Cane et al., 2012; Michie et al., 2005).

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Figure 1

Design for preliminary results