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9   **The indirect effects of transformational leadership in Soccer programmes for socio-**

10   **economically disadvantaged individuals: need satisfaction as a mechanism towards**

11   **personal development**

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Abstract

Objectives: The purpose of the present study was to examine the direct and indirect effects of coach transformational leadership (TL) on the current lives of socio-economically disadvantaged individuals within a sport-based education programme. **Design:** Cross-sectional. **Methods:** 159 participants completed questionnaires on the perceptions of their lead coaches' TL, perceived basic need satisfaction (autonomy, competence, relatedness) in relation to programme attendance, and feelings of resilience and life-satisfaction in their current life. **Results:** PROCESS analysis revealed that all differentiated TL behaviours (but high-performance expectations) had a positive indirect effect on outcomes (resilience and life-satisfaction) via competence and a negative indirect effect on outcomes via relatedness. High-performance expectations demonstrated a direct effect on life satisfaction. **Conclusion:** The results demonstrate how distinct coach transformational behaviours impact differently on the lives of disadvantaged individuals within a sports-based education programme. The differentiated conceptualisation of TL revealed nuanced results, furthering our understanding of how each TL interacts with the three basic psychological needs. Finally, our results demonstrate the significance competence may hold in transferring the effect of different transformational behaviours onto the everyday lives of disadvantaged individuals.

Introduction

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52   Social and economic inequality continues to cause concern.[1] A growing number of

53   individuals within Western societies, often referred to as socio-economically disadvantaged,

54   face a multitude of issues such as lack of income, difficulties accessing education, poor

55   health status and unemployment.[2, 3] Currently, the socio-economic inequalities derived from

56   the COVID-19[4] pandemic and cost of living crisis[5] are causing disproportionate adversity

57   among disadvantaged populations, whilst homelessness is on the rise in developed countries

58   like the United States, and United Kingdom.[6] Moreover, socio-economically disadvantaged

59   individuals often encounter challenging setbacks, find it difficult to extend friendship

60   networks and suffer from a range of mental health issues.[7] Given these issues it is important

61   to explore the potential contexts and mechanisms which may help disadvantaged individuals

62   overcome adversities and flourish.

63   Sport is a context which is receiving increasing recognition for its role in facilitating

64   developmental experiences for disadvantaged individuals.[8,9] Indeed, several positive

65   outcomes have been attributed to sports participation, including personal and social

66   development,[10] motivation,[11] self-reliance and discipline,[12] and emotional control.[13] Given the

67   potential and popularity of sport to promote positive developmental experiences,[14] a number

68   of organized sports-based education programmes have been established. The result is a

69   rapidly growing Sport for Development and Peace (SDP) programme movement within

70   disadvantaged regions.[15] These programmes typically use the appeal of sport as an initial

71   attraction, but also deliver educational support and provide a platform for skills to be

72   transferred into other areas of participants' lives. For example, Cowan and colleagues[16]

73   explored one such programme in the United Kingdom for unemployed youth which aimed to

74   build confidence and skills towards employment. The programme provided 13 weeks of

75   practical soccer sessions which were focused on providing specific developmental

76   opportunities (e.g., communication, teamwork) alongside additional employability support.

77   The results from this study discuss how coach-created motivational climates may foster or

78   hinder the development of life-skills among a disadvantaged population.[16]

79   Despite the benefits of attending these programmes, mere participation is insufficient

80   for the facilitation of positive outcomes. In most cases, it is the role of those within leadership

81   positions (i.e., coaches, mentors) who help shape positive sport experiences and help ensure

82   that positive outcomes materialise.[17] For instance, coaches who provide autonomy, develop

83   supportive relationships and role model appropriate behaviour contribute to the personal

84   development of disadvantaged individuals within their programme.[16] Yet, with the exception

85   of a few researchers (see.[11,18]), these explorations of coaching behaviour have been

86   qualitative, with limited understanding of the mechanisms which predict development in

87   large samples. Additionally, studies have predominantly examined the role of the coach

88   within various disadvantaged *youth* settings.[16,19] To the authors' knowledge, no study has

89   attempted to examine the effects of coach leadership behaviours on the personal development

90   of adult participants within a sports-based education programme. Arguably, these

91   programmes pertain greater meaning to adult populations, as youth participants may still have

92   the structure of education and the obligatory care of adult guardians whereas sport may

93   provide the structure and escape from isolation that is not afforded to adults who experience

94   hardship. The present study, therefore, aimed to examine specific coach behaviours and

95   mechanisms which contribute towards the personal development of disadvantaged adults.

96   **Conceptualising Coach Transformational Leadership**

97   Coach behaviours hold a critical role in shaping the sports participation experience.[20]

98   Yet, there is limited understanding of which distinct behaviours lead to positive development

99   with sports-based programmes. Transformational Leadership (TL) is a useful theory to

100   analyse coaching practice (e.g.,[21–23]). TL is often described as a behavioural approach to

101   leadership (although this has recently been questioned in sport, see [23]) whereby

102   transformational leaders are proposed to inspire followers via personal and emotional appeals

103   to motivate followers to surpass expectations.[24] TL is likely to be a relevant framework for

104   coaching disadvantaged populations, given its emphasis on articulating positive and

105   meaningful visions of the future, challenging old actions with new methods, while providing

106   individual support.[23,25]

107   When conceptualising TL, researchers adopt a global model (*all transformational*

108   *behaviours combined to form a single construct*; [24]) or a differentiated approach (*each*

109   *construct of TL examined as a distinct behaviour*; [26, 27]). The global approach has been

110   criticized for oversimplifying TL's diverse range of behaviours, whereas a differentiated

111   conceptualisation of TL enables a nuanced assessment of the distinct leadership behaviors.[23]

112   Callow et al.[27] validated a differentiated index measuring TL in sport, outlining six

113   transformational behaviours: *Individual consideration*, displaying respect for followers and

114   showing concern for their personal feelings and needs; *Inspirational motivation*, inspiring

115   others with their positive views of the future; *Intellectual stimulation,* influencing followers

116   to challenge approaches they use and to re-think how they work or perform; *Fostering*

117   *acceptance of group goals* promoting an environment where individuals work together

118   towards the completion of a task or common goal; *High performance expectations,*

119   conveying their expectations of excellence and performance on the behalf of their followers

120   and *Appropriate role modelling,* showing an exemplary behaviour and setting an example

121   with consistent values for others to follow. This index also contains one transactional

122   behaviour, *contingent reward*, where leaders provide positive reinforcement in return for

123   desired follower behaviour and performance.

124   Growing interest into TL may be due to its positive associations with well-being and

125   performance outcomes previously found in education,[28] military,[29] and business contexts.[30] In

126   sport, TL behaviours have been found to positively influence participant effort,[25] cohesion,[27]

127   well-being and basic need satisfaction,[31] and athlete performance.[32] Albeit no research has

128   examined TL within sports-based education programmes for disadvantaged individuals. This

129   is somewhat surprising considering TL's focus on inspiring and empowering followers whilst

130   fostering more optimistic views of the future.[23] In doing so, transformational leaders may

131   inspire disadvantaged sport participants who often deal with adversity[33]. Indeed, within

132   disadvantaged populations, suitable role models are scarcely found,[34] even though these

133   individuals may seek leaders to aspire to and to help ease suffering attributed to their socio-

134   economic status.[34] Transformational leaders may inspire personal development within

135   disadvantaged populations to help these individuals endure the difficulties that they face via

136   supporting their psychological needs. Indeed, in the current study, we propose that within a

137   sport-based education programme, coach TL will indirectly affect disadvantaged individuals

138   lives via the satisfaction of their basic needs.[31, 35]

139   **Transformational Leadership, Resilience and Life Satisfaction**

140   Resilience is an outcome of significance within disadvantaged individuals, as it is

141   defined as the ability to endure prolonged stressful situations, or to bounce back from

142   adversity.[36] In this context, adversity may include drug issues, homelessness or mental health

143   issues and there is strong evidence to suggest disadvantaged individuals' resilience is

144   predictive of their future life outcomes. For instance, enhanced resilience can have positive

145   implications for disadvantaged individuals such as greater problem-solving skills, emotional

146   regulation, stress management and coping with adverse events.[37] Bass[35] outlined that the

147   central tenants of TL could augment greater resilience amongst subordinates. Given that TL

148   has been shown to be predict resilience in other contexts (i.e., miliary,[29] employment,[38]

149   university students[39]), we believe that enhancements in resilience will be a consequence of

150   following a transformational leader within disadvantaged populations. Recently, trauma

151 survivors from disadvantaged populations have stated that their resilience has been enhanced

152 through participating in SDP programmes.[10,40] While coaches were identified as important

153 components of the sport programming in both studies, the link between coach behaviour and

154 enhancements in resilience was not investigated. It is therefore important to test the

155 relationship between coach TL and resilience given the importance of enduring hardship

156 within this context.[23, 29]

157   Alongside resilience, it's important to consider the way individuals feel about their

158 own lives and how satisfied they are with their current situation. Indeed, disadvantaged

159 individuals are likely to experience low levels of life satisfaction and a sense of helplessness

160 regarding their lives.[41] To combat this, the intervention of a transformational leader could

161 make a positive impact in environments where role models and parents are often absent.

162 Specifically, TL is centred around providing a positive vision of the future and given TL's

163 capacity for facilitating positive psychological outcomes such as well-being,[31] satisfaction

164 within the workplace,[42] and satisfaction in the home environment,[43] we would expect that

165 transformational leaders would have a positive impact upon general life satisfaction. In

166 support of this, transformational parents have been observed to increase life satisfaction and

167 other positive health behaviours in adolescence.[43] For these reasons, the current investigation

168 will seek to examine the relationship between TL and satisfaction with current life within a

169 sport programme for disadvantaged individuals.

170 **Transformational Leadership and Need Satisfaction**

171   In recent years, authors have called for greater explanation of the processes involved

172 in TL.[23] As such, an exploration of mechanisms that cultivate a link between TL and the

173 psychological development of disadvantaged populations is also needed. Basic need

174 satisfaction, a sub-theory of self-determination theory (SDT[35]), maintains that the nurturing

175 of human consciousness, motivation and well-being is dependent on the satisfaction of three

176   universal psychological needs; autonomy, competence, and relatedness. Autonomy relates to

177   the need to make decisions and be the origin of one's own behaviour. Competence refers to

178   one's sense of achievement, effectiveness, and purpose, while relatedness encompasses

179   feelings of care and acceptance, whilst being securely attached to others.[35] Previous sports-

180   based research has found that the satisfaction of the three basic needs is related to well-

181   being,[31] prosocial behavior,[44] mental toughness,[45]and resilience.[46]

182   Basic need satisfaction is proposed to be a useful theoretical framework for

183   understanding the influences of TL.[31] Indeed, research utilising global conceptualisations of

184   TL within work-based environments have revealed that transformational behaviours satisfy

185   followers' needs for autonomy, competence, and relatedness which, in turn, were related to

186   occupational self-efficacy,[47] and work engagement and performance.[48] In a sport context with

187   a sample of floorball players the relationship between TL and well-being was mediated by

188   need satisfaction.[31] These studies suggest that basic need satisfaction is a vehicle via which

189   TL may have an impact on follower outcomes. Despite this, the mediating role of need

190   satisfaction is still in its infancy within TL research thus warrants greater exploration.

191   Stenling and Tavelin[31] used a global conceptualisation of TL behaviour which prevented the

192   assessment of each TL behaviour and its relationship with needs satisfaction and well-being

193   (see for example: [23, 25]). For instance, a participant's need for autonomy may be fulfilled by a

194   coach's use of fostering acceptance of group goals and promoting an environment whereby

195   individuals can make choices to achieve shared or common goals. Intellectual stimulation

196   may also be positively associated with autonomy given the emphasis on encouraging

197   followers to come up with their own solutions to problems.[31] The need for competence may

198   be satisfied by a transformational coach's use high performance expectations,[24, 49] by not only

199   conveying that success is expected and achievable but by augmenting Pygmalion effects to

200   inspire greater self-confidence and competence.[29] Finally, coaches who adopt individual

201   consideration and appropriate role modelling within their coaching style may satisfy an

202   individual's need for relatedness,[31] while having a suitable role model to follow may be an

203   effective tool to satisfy competence during vicarious experiences.[50] Clearly, it would not be

204   expected that all TL behaviours would impact on need satisfaction in the same way, as such

205   the utilization of a differentiated analysis of TL will shed light upon the proposed distinct

206   impacts of TL on basic psychological needs.

207   **The Present Study**

208   The present study aimed to examine the mechanisms which may lead to the personal

209   development of disadvantaged adults attending a sport and education programme.

210   Specifically, we aimed to examine the indirect effects of distinct transformational behaviours

211   on resilience and life satisfaction via the satisfaction of the three basic psychological needs.

212   Previous research indicates that coach TL may result in the satisfaction of all three basic

213   psychological needs.[31] Yet, to our knowledge there is no research that examines the impact of

214   coach TL on followers when they are not engaged with the transformational leader (i.e., the

215   impact of a transformational coach on the everyday life of an athlete). In accordance with

216   existing differentiated conceptualizations,[21, 23] we make several hypothesised arguments.

217   Given intellectual stimulation is defined as encouraging followers to come up with their own

218   solutions to problems,[24, 49] we hypothesised that intellectual stimulation would positively

219   predict resilience via autonomy. This assumes that followers will independently address

220   problems with heuristically acquired solutions, therefore becoming more independent to

221   resolve issues and therefore resilient.[29] It is theorised that transformational leaders motivate

222   individuals to persist when conditions are stressful and difficult.[49] To this end, we

223   hypothesised that inspirational motivation would be positively related to resilience via

224   competence, as leaders who motivate followers instil confidence and resilience as results

225   have demonstrated in previous research.[29] As TL places a strong emphasis on cohesion and

226 social interconnectedness,[27] it is hypothesised that the socio-emotional constructs of TL

227 (appropriate role modelling, individual consideration, fostering acceptance of group goals)

228 would positively predict life satisfaction via relatedness. This hypothesis is based upon an

229 individual's need for positive social networks and role models, if they are secured then life

230 satisfaction is expected to increase.[27] Finally, high performance expectations was anticipated

231 to positively predict life satisfaction via competence by augmenting Pygmalion effects

232 (where higher expectation leads to greater effort and performance) increasing competence,[51,

233 [52]and in turn, life satisfaction is argued to increase the more competent an individual

234 perceives they may be. Therefore, the current study tested the hypothesised indirect effects of

235 TL's distinct behaviours within a disadvantaged population.

236   **Methods**

237 *Participants and context*

238   The sample consisted of 159 adult participants (male = 151, female = 8) of a national

239 sports-based education programme (M^{age} = 25.57, SD = 8.83, range 16-60). This programme

240 engages with disadvantaged adults and aims to provide positive personal development via

241 weekly drop-in sport sessions across four UK cities. Typical sessions involve round robin

242 soccer tournaments whereby participants play competitive games with other attendees, while

243 regular attendees have the opportunity to play in national soccer competitions. 7.3% of the

244 sample stated that they were currently homeless, while 6.7% stated "other" as their current

245 living situation. 18% of participants were in full-time employment with 13% in full-time

246 education. 12% were in paid part-time employment while 35% of participants were

247 unemployed, and a further 12.3% were not working due to sickness or a disability. The

248 remaining 7% reported that they were currently in volunteer work.

249   Data was gathered from 7 session venues across the four cities and sessions were

250 delivered by 11 coaches across these venues. The participants had been attending the

251   programmes for at least one month prior to data collection. One month was deemed enough

252   time for the participants to experience the programmes and provide informed perceptions of

253   their coaches' leadership (mean months attending = 25.5). Participants stated that they

254   encountered the programmes through friends (42%) or referral by other charities (31%) and

255   attribute their attendance to the enjoyment of soccer (40%), to improve fitness and well-being

256   (17%) and to make friends (9%). Participants also reported overcoming mental health issues

257   (6%) and drug addictions (3%) as reasons for regular attendance.

258   **Measures**

259   *Transformational leadership behaviours*

260   The differentiated transformational leadership inventory (DTLI[27]) was used to assess

261   participants' perceptions of their coaches' TL behaviours. The 6 transformational behaviours

262   of the DTLI were used to create a 23-item differentiated index. These behaviours include;

263   *Individual consideration* (e.g., my coach treats each team member as an individual).

264   *Inspirational Motivation* (e.g., my coach talks in a way that makes me believe I can succeed);

265   *Intellectual Stimulation* (e.g., my coach gets me to rethink how I do things); *High*

266   *Performance Expectations* (e.g., my coach expects a lot from us); *Fostering Acceptance of*

267   *Group Goals* (e.g., my coach encourages athletes to be team players)*; and Appropriate Role*

268   *Model* (e.g., my coach leads by example). Each item was measured by a five-point Likert

269   scale anchored by 1 (*not at all*) and 5 (*all the time*). Previous research has provided evidence

270   for the scales factorial and discriminant validity (e.g., [23,27]), while other studies have

271   demonstrated strong internal consistency with Cronbach's alpha results surpassing criterion

272   (α =.70) for use within the psychological domain (Smith et al., 2011). In the current study, a

273   Confirmatory Factor Analysis (CFA) demonstrated the six-factor scales' goodness of fit to

274   the data, S-B $\chi2$ (769) = 323, p < .01; RMSEA = .09; CFI = .93; TLI = .92; SRMR = .63.

275   *Psychological need satisfaction*

276   Six items of the previous 9-item basic need satisfaction in relationship scale (BNS-

277   RS[53]) were adapted for use within the sport programmes context. Participants were asked to

278   rate the extent to which their needs were satisfied during the programme by responding 1 (*no*

279   *not at all*) to 7 (*very true*). The scale measures autonomy; "when I attend the programme… I

280   feel free to be who I am", competence; "when I attend the programme… I feel like a

281   competent person", and relatedness; "When I attend the programme… I feel cared about".

282   Previous coaching research has reported the scales sound psychometric properties, with

283   Cronbach's alpha scores ranging from 0.66-0.92.[54] After conducting a CFA, three poorly

284   performing items were removed and after the removal of three poorly performing items, the 6

285   item BNS-RS demonstrated acceptable fit to our model, S-B $\chi2$ (27.13) = 9, p < .001;

286   RMSEA = .11; CFI = .93; TLI = .89; SRMR = .05.

287   *Resilience*

288   The brief resilience scale (BRS) is based on the dictionary definition of resilience,

289   which is "to bounce or spring back."[36] Items from this scale were measured between 1

290   (*strongly disagree*) to 5 (*strongly agree*) and was used to measure the programme

291   participants' feelings of resilience throughout their everyday life. The scale featured three

292   positively worded items (e.g., "I tend to bounce back quickly after hard times") and three

293   negatively worded items which were reverse scored (e.g., "I have a hard time making it

294   through stressful events"). A review of resilience measures supported the scale's construct

295   validity, test reliability and interpretability[55] and it has also been a preferred measure of

296   resilience within sport.[56] Reported Cronbach's alpha report to range between .80-.91, with

297   support for the scales convergent and predictive validity.[36] Following a Confirmatory Factor

298   Analysis (CFA), two poorly performing item were deleted. The scale then demonstrated

299   goodness of fit to the data S-B $\chi2$ (2.16) = 2, p < .05; RMSEA = .02; CFI = 1.00; TLI = .99;

300   SRMR = .03.

301   {[Insert table. 1 here]}

Life Satisfaction

303   Life satisfaction was measured using the five-item Satisfaction with Life Scale.[57]This

scale is anchored between 1 (*strongly disagree*) and 5 (*strongly agree*) and was used to

measure the participants' perceptions of satisfaction in their recent life (e.g., *"In most ways*

my life is close to my ideal"). Research has shown the scales acceptable internal consistency

α= 0.82- 0.87.[57] Our CFA revealed a good fit to the data, S-B $\chi2$ (4.68) = 5, p < .05; RMSEA

= .00; CFI = 1.00; TLI = .1.00; SRMR = .01.

Procedure

310   Ethical approval was granted from the University's ethics committee and consent was

obtained from the programme coordinators before recruiting and obtaining participant's

informed consent. Consenting participants were then asked to answer each question as

honestly as possible, and informed that all their responses would remain confidential and

non-participation in the research would not impact upon their future involvement in the

programme. All participants were verbally asked about their levels of literacy skills by the

first author, and some were aided to complete the questionnaires. All data was collected

either during session registration, intermission, at the end of a training session or at a national

tournament which brought together teams from various session venues.

Data Analysis

320   We examined the indirect effects of TL on our outcome variables via need satisfaction

using PROCESS.[58] PROCESS provides the total indirect effect and the separate indirect

effects through each mediator while controlling for effects of subsequent mediators via

bootstrapping. PROCESS also allowed us to control for potential cluster effects (in our case

multiple coaches) accounting for the nested nature of the data. 12 separate PROCESS models

were run to examine the indirect effects of the six TL behaviours (independent variables) on

326 resilience and life satisfaction (dependent variables) via the three basic needs (mediators)

327 using multiple mediation analysis. This was to understand which basic psychological need

328 played a more prevalent role in the relationship between TL and the psychological outcomes

329 of the disadvantaged sport participants. The analysis was conducted with 10,000 bootstrap

330 samples. Lower- and upper-bound 95% confidence intervals that do not involve zero

331 demonstrate results of significance at the .05 level.

Results

333 Descriptives

334   Means, standard deviations, and intercorrelations among variables are displayed in

335 Table 2. Results demonstrate that all coach TL behaviours apart from High *Performance*

336 *Expectations* were significantly correlated to all three basic psychological needs; competence

337 ($r = .20$ to $.37$, $p < .01$), relatedness ($r = .23.$ to $.32$, $p < .01$) and autonomy ($r = .27$ to $.41$, $p <$

338 $.01$). Competence was significantly correlated with resilience ($r = .16$ $p < .05$). *High*

339 *Performance Expectations* was the only TL behaviour to significantly correlate with life

340 satisfaction ($r = .23$, $p < .01$). Participant life satisfaction was significantly correlated to

341 resilience ($r = .45$ $p < .05$).

{[Insert Table 2 here]}

343 Regression Analysis

344   Table 3 displays results of the regression analysis conducted which includes

345 unstandardized bootstrap estimates with 95% confidence intervals of both specific and total

346 indirect effects of differentiated coach TL behaviours on life satisfaction and resilience.

{[Insert Table 3 here]}

348   Inspirational motivation had a significant positive indirect effect on life satisfaction

349 ($B = .07$, $SE = .04$) and resilience ($B = .06$, $SE.04$) via competence, and a negative indirect

350 effect on life satisfaction ($B = -.09$, $SE = .05$) and resilience ($B = -.07$, $SE .04$) via

351   relatedness. Similarly, intellectual stimulation had significant positive indirect effect on life

352   satisfaction (B = .05, SE = .03) and resilience (B = .04, SE .03) via competence and a

353   significant negative indirect effect on life satisfaction (B = -.08, SE = .04) and resilience (B =

354   -.05, SE .03) via relatedness. Individual consideration had a significant and positive indirect

355   effect on life satisfaction (B = .10, SE = .05) and resilience (B = .08, SE .05) via competence

356   and a negative indirect effect on life satisfaction (B = -.08, SE = .05) and resilience (B = -.06,

357   SE .04) via relatedness. Appropriate role modelling had significant positive effect on life

358   satisfaction (B = .06, SE = .04) and resilience (B = .05, SE .03) via competence and a

359   negative indirect effect on life satisfaction (B = -.08, SE = .05) and resilience (B = -.07, SE

360   .04) via relatedness. Finally, and consisting similarly to the previous TL behaviours, fostering

361   acceptance of group goals had a significant effect on life satisfaction (B = .08, SE = .05) and

362   resilience (B = .07, SE .04) via competence and a negative effect on life satisfaction (B = -

363   .07, SE = .03) and resilience (B = -.06, SE .03) via relatedness.

364   High performance expectation did not have an indirect effect on any of the outcomes.

365   However, high performance expectation did have a significant direct effect on life

366   satisfaction (B= .19, SE = .08 p <.05), there were no other direct effects of TL behaviours on

367   life satisfaction or resilience.

368   **Discussion**

369   The purpose of this study was to examine the differentiated effects of coach TL

370   within a sports-based education programme for disadvantaged individuals and to explore the

371   mechanisms that mediate these effects. The results revealed that five of the six TL behaviours

372   indirectly predicted life satisfaction and resilience via satisfying the need for competence.

373   Interestingly, relatedness negatively mediated the relationships between the same five

374   behaviours and the outcomes of life satisfaction and resilience. Autonomy whilst attending

375   the programme did not significantly mediate the relationships between any of the

376 transformational behaviours and resilience or life satisfaction. High performance expectations

377 directly predicted participants' general life satisfaction.

378 As hypothesised, competence mediated the relationship between inspirational

379 motivation and resilience. Competence also mediated the relationship between intellectual

380 stimulation, fostering acceptance of group goals, individual consideration, appropriate role

381 modelling and resilience. Our empirical data show how all differentiated TL behaviours are

382 positive predictors of resilience.[29] These results reinforce the existing theory that

383 transformational leaders can inspire and motivate followers to become more competent to

384 persist during difficult circumstances.[24] The mediating effect of competence could be further

385 explained by previous research which revealed a positive link between TL and resilience,

386 when transformational leaders instilled a sense of confidence and self-efficacy to persist

387 during stressful circumstances or to endure setbacks.[49, 59] However, unlike Hardy and

388 colleagues[27] research with military recruits, our research did not replicate the result of high-

389 performance expectations as a significant predictor of resilience. Indeed, coaches who display

390 high performance expectations could increase followers' perceptions of challenge,[25] which

391 may not be optimal in developing resilience or feelings of competence in populations who

392 already battle significant challenges associated with their socio-economic status.

393 Similarly, competence positively and significantly mediated the relationship between

394 the same five of six transformational behaviours (all but high-performance expectations) and

395 life satisfaction. Existing empirical data shows that global conceptualisations of TL

396 behaviours can significantly predict life satisfaction in sport[31] and our results replicate

397 previous findings that TL behaviours can positively impact psycho-social outcomes via the

398 satisfaction of competence.[31] To further explain this relationship between competence and

399 life satisfaction, it is well known that people respond positively when perceiving to be

400 effective or achieving goals.[50,60] Therefore, it is unsurprising that when a leader facilitates

401 feelings of purposefulness and effectiveness via high performance expectations, that it has a

402 positive impact on general well-being and life satisfaction.[57] However, unlike existing

403 research, our results show the positive role in which competence and transformational

404 behaviours play as they impact both life satisfaction and resilience outside of the programme

405 context (i.e., in everyday life). This result highlights the significant need for role models,

406 mentors, and leaders within disadvantaged populations,[34] with specific transformational

407 behaviours potentially leading to greater general life satisfaction. For instance, the benefits of

408 having multiple effective leaders in various contexts (i.e., family, rehabilitation, education)

409 could have a substantial accumulative effect on the development of an individual who is

410 facing multifaceted adversities. For example, many of our sample face substance problems

411 and homelessness, with research demonstrating that engaging with professionals with

412 multiple disciplines is most beneficial to effect change.[61] Consequently, a proposition could

413 be made surrounding the accumulative effect of TL in these services for the reduction of

414 problems and optimal development of disadvantaged populations.

415   Contrary to our hypotheses, there was a negative indirect effect between all

416 differentiated TL behaviours (but high-performance expectations) and life satisfaction and

417 resilience via relatedness. This means that as expected TL was positively related to feelings

418 of relatedness which is likely to be due to the provision of positive messages and

419 individualised support which develops strong relationships.[21, 27]However, the levels of

420 relatedness experienced within the programme were negatively related to life satisfaction and

421 resilience beyond the programme. Indeed, some individuals may rely heavily on their

422 transformational leader to help create friendships[62] and positive relationships at the

423 programme, which may make participants more aware of the lack of meaningful relationships

424 and support they experience in the wider world.[7] Ultimately, decreasing their perceptions of

425 their resilience and life satisfaction in everyday life.

426   In sport psychology research, autonomy has been positively associated with

427 developmental experiences, motivation, and well-being.[11, 44, 63] Yet, Stenling and Tafvelin[31]

428 were able to establish autonomy as a positive mediator between TL and well-being in

429 floorball players. Indeed, like many other TL researchers, their examinations are context

430 specific and explicitly focuses on the time spent engaged with the sport and the

431 transformational leader. A possible contextual explanation for the lack of mediating impact of

432 autonomy within our data is the chaotic lives led by our sample; one which involves

433 homelessness, unemployment, deprivation, and drug use. An argument could be made that if

434 an individual's life is controlled by disadvantaged circumstances, then it may be very

435 difficult to seize opportunities of control and operate independently.[10, 16] Furthermore, our

436 results suggest that an environment that inspires competence (feelings of effectiveness) and

437 facilitates structure and organization may be of greater benefit for individuals who are

438 battling difficult adversities.

439   Finally, high performance expectations were a direct predictor of life satisfaction

440 rather than impacting on life satisfaction via competence as predicted. Indeed, it seems that

441 the positive expectations of a coach can augment Pygmalion effects which are likely to

442 directly increase an individuals' positive affect and therefore perceived life satisfaction

443 regardless of how competent they feel regarding their own abilities. Bass[49] suggested that

444 follower satisfaction is raised because of high-performance expectations.

Practical Implications and Future Research

446   From an applied perspective, the results support the use of differentiated

447 conceptualisation by demonstrating how different TL behaviours yield nuanced results.[23]

448 Ultimately, this provides coach educators and practitioners with a theoretical rationale for

449 each of the separate TL behaviors.[27] Our results imply that articulating positive and

450 meaningful future visions, embodying role model qualities, adhering to the specific needs of

451   individuals and challenging old methods creatively, coaches can positively shape the sports

452   participation experience. Our data implies that as a result, TL may allow the individual to feel

453   competent and thus positively develop in the wider world by enduring adversity and by

454   feeling more satisfied with current life. Conversely, in the context of relatedness, coaches of

455   disadvantaged groups would be wise to assist individuals to develop effective support

456   networks outside the immediate programme to ensure that positive programme experiences

457   are transferrable to their daily lives.

458   Additionally, our research provided further evidence of coaching contributions in the

459   life skill development and transfer hypothesis. In short, coaches not only impact players when

460   in the sporting environment, but positive implications can be transferred to other contexts

461   (i.e., education, relationships, employment).[8] As such, we encourage SDP programmes to

462   offer TL support and training to coaches or caring practitioners. Specifically, our research

463   implies that programme coaches should be supported to reflect and develop their ability to

464   provide inspirational motivation, role modelling, individual consideration, and intellectual

465   stimulation to develop competence in the players which can then transfer positive personal

466   development into the wider world. Consideration should also be afforded to high-

467   performance expectations given its direct capacity to enhance life satisfaction. Our research

468   implies that coaches (while also providing the necessary care) should seek to challenge and

469   expect high standards from programme participants to directly predict development in the

470   wider world. The effect of high-performance expectations could perhaps counter

471   disadvantaged populations experiences of being treated with apathy and lack of expectation

472   in education or familial relationships.[2,3] However, high-performance expectations should be

473   administered with caution and with individual consideration in mind.

474   Future research should seek to further understand the antecedents to positive

475   leadership behaviours, the personal characteristics that makes an individual transformational

476   and the climates in which these traits are learnt. Providing the evidence to support the high

477   trainability of TL,[27] other avenues for future research should include coach education

478   interventions and field experiments; investigating how TL can shape the relationships

479   between coaches and the psychological development of sports participants. Specifically, as

480   our research demonstrates TL's effectiveness with disadvantaged sports participants, future

481   research could examine variables exploring TL's developmental potentials amidst the

482   growing SDP movement.[13, 15] Moreover, research into the explanatory mechanisms that

483   mediate the relationship between transformational behaviours and follower outcomes is also

484   warranted. Furthermore, additional quantitative examinations of the expanding SPD

485   movement are necessary, particularly investigations of those occupying leader and mentoring

486   positions who play an integral role in the developmental aspirations of these programmes.

487   Finally, researchers could employ a qualitative perspective to explore the nuances of

488   transformational coaching in sports development domains. Perhaps an ethnographic approach

489   could provide researchers a unique insight into TL coaching and development strategies

490   within this movement.

491   **Conclusion**

492   A strength of this study is the uncovered relationships between the three

493   psychological needs and how they differently mediate the impacts of TL on life satisfaction

494   and resilience. We extend the work of TL in sport by utilising a differentiated

495   conceptualisation of TL with such nuanced results augmenting our understanding of both TL

496   and need satisfaction within sport for disadvantaged populations. Moreover, our findings also

497   add to the existing research by establishing relationships between TL behaviours and life

498   outcomes rather than those restricted to sport experiences. Finally, a strength of the current

499   study is the relatively large sample of "hard-to-reach" individuals who face extreme

500   hardships, such as homelessness, mental health issues, drug use and unemployment.

501   This study is not without limitation. Consistent throughout existing TL in sport

502 research are the limitations associated with cross-sectional research, which prohibits making

503 inferences regarding cause and effect. Unfortunately, in the current context the sporadic

504 nature of participant attendance prohibited a longitudinal examination of the mediating

505 processes of TL behaviours in disadvantaged sport. Second, all variables used self-report

506 measures which may influence a single method bias. Future research could use multiple

507 methods (i.e., coach observations, questionnaires) from multiple perspectives (i.e., coach and

508 athlete) to gain further insight into the effect of TL on follower outcomes. Finally,

509 modifications had to be made to both the BNS-RS and BRS to attain the acceptable fit.

510 Further investigations into the use of both scales within disadvantaged populations is

511 therefore necessary.

512   In conclusion, this examination of a sports-based education programme is the first to

513 suggest that TL can have a positive impact on the resilience and life satisfaction of

514 disadvantaged individuals during their current everyday life. Moreover, indications from our

515 analysis further understanding of basic need satisfaction as an explanatory framework in the

516 processes of TL. It appears that through satisfying the need for competence, TL behaviours

517 may positively impact the everyday lives of disadvantaged individuals.

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698   Table 1
699   *Confirmatory Factor Analysis (N = 159)*

Measure	χ^2	df	P	RMSEA	CFI	TLI	SRMR
1. Transformational Leadership	769.01	323	0.00	.09	.93	.92	.62
2. Need Satisfaction	27.13	9	0.00	.11	.93	.89	.05
3. Life Satisfaction	4.68	5	0.46	.00	1.00	1.00	.01
4. Resilience	2.16	2	0.34	.02	1.00	.99	.03

700
701   Table 2

702   *Descriptive statistics and intercorrelations of model variables (N = 159)*

Measure	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. IS	4.08	.72	-										
2. IC	4.34	.67	.73**	-									
3. IM	4.27	.67	.76**	.83**	-								
4. AGG	4.34	.68	.70**	.78**	.78**	-							
5. ARM	4.29	.70	.74**	.71**	.76**	.73**	-						
6. HPE	3.75	.90	.50**	.46**	.46**	.46**	.47**	-					
7. Autonomy	5.79	1.20	.27**	.41**	.34**	.34**	.30**	.09	-				
8. Competence	5.33	1.27	.20**	.37**	.26**	.30**	.27**	.08	.56**	-			
9. Relatedness	5.45	1.17	.29**	.31**	.32**	.27**	.32**	.06	.43**	.48**	-		
10. Life Sat.	3.41	.89	.05	.03	.04	.09	.02	.23**	-.02	.07	-.12	-	
11. Resilience	3.38	.71	-.05	.06	.06	.15	.07	.07	.10	.16*	-.06	.45*	-

703   *Not*e. Variable 1, 5, 6 & 7 measures rated on a 5-point Likert scale ranged from 1 to 5; Variables 2 to 4: rated

704   on a 7-point Likert scale from 1 *(Not at all true)* to 5 *(Very true)* * *p* < .05, ** <.001.

Table 3.

Results of mediated regression analyses, the effects of Coach Transformational Leadership (X) on Life Satisfaction (Y1) and Resilience (Y2).

	Inspirational Motivation. 95% CI			Intellectual Stimulation 95% CI			Individual. Consideration 95% CI			Approp. Role Model 95% CI			Accep. Group Goals 95% CI		
	B	SE	LL UL	B	SE	LL UL	B	SE	LL UL	B	SE	LL UL	B	SE	LL UL
(X) to (M)															
Competence	.48*	.15	.19 .78	.35*	.14	.07 .63	.65**	.15	.36 .94	.42*	.15	.13 .71	.55**	.15	.26 .84
Autonomy	.58**	.13	.32 - .85	.41**	.13	.16 .70	.67**	.13	.40 .93	.40**	.13	.14 .67	.60**	.13	.34 .86
Relatedness	.62**	.14	.40 - .89	.53**	.13	.28 .79	.58**	.14	.30 .86	.58**	.13	.32 .85	.48**	.14	.21 .76
(M) to (Y1)															
Competence	.14*	.07	.00 .28	.15*	.07	.01 .29	.15*	.07	.02 .22	.15*	.07	.01 .29	.14	.07	-.00 -.28
Autonomy	-.06	.08	-.21 .09	-.06	.08	-.21 .09	-.05	.08	-.21 .10	-.06	.08	-.21 .09	-.07	.08	-.22 - .08
Relatedness	-.14	.07	-.29 .23	-.14	.07	-.29 .00	-.12	.07	-.28 .01	-.14	.07	-.28 .01	-.14*	.07	-.28 -.00
(M) to (Y2)															
Competence	.12*	.06	.01 .24	.12*	.06	.01 .24	.13*	.06	.01 - .24	.12*	.06	.01 - .24	.12*	.06	.00 -.23
Autonomy	.02	.06	-.11 .14	.03	.06	-.09 .15	.03	.06	-.10 - .15	.02	.06	-.10 -.14	.01	.06	.12 -.13
Relatedness	-.11	-.23	-.15 .00	-.09	.06	-.21 .02	-.11	.06	-.22- .01	-.11	.06	-.23 - .00	-.12	.06	-.23 -.00
Indirect Effects on (Y1)	Eff			Eff			Eff			Eff			Eff		
Competence	.07*	.04	.01 . 18	.05*	.03	.01 .15	.10*	.05	.02 .22	.06*	.04	.01 .17	.08*	.05	.01 .19
Autonomy	-.04	.05	-.14 .05	-.02	.04	-.12 .03	-.04	.06	-.15 .07	-.02	.03	-.11 .03	-.04	.04	-.15 .05
Relatedness	-.09*	.05	-.20 -.01	-.08*	.04	-.18 -.01	-.08*	.05	-.20 -.00	-.08*	.05	-.20 -.00	-.07*	.03	-.18 -.02
Total	-.05	.05	-.16 .05	-.05	.04	-.13 .03	-.02	.06	.13 -.12	-.04	.05	-.14 .05	-.03	.05	-.14 .08
Indirect Effects on (Y2)	Eff			Eff			Eff			Eff			Eff		
Competence	.06*	.05	.01 .16	.04*	.03	.00 .13	.08*	.05	.01 - .21	.05*	.03	.01 .14	.07*	.04	.01 .17
Autonomy	.01	.03	-.06 .08	.01	.03	-.03 .08	.02	.04	-.06 .10	.01	.02	-.04 .06	.00	.04	-.07 .07
Relatedness	-.07*	.04	-.17 -.01	-.05*	.03	-.13 -.00	-.06*	.04	-.16 -01	-.07*	.04	-.17 .01	-.06*	.03	-.14 .01
Total	-.00	.05	-.16 .05	.01	.04	-.06 .09	.04	.05	-.06 .14	-.01	.04	-.09 .07	.01	.03	-.07 .09

Note. B = unstandardized regression coefficients*;* Eff= Indirect effect of X on Y; M = Mediator variables; *LL*=lower limit of 95% confidence interval; UL= upper limit of 95% confidence interval; SE = Standard Error; * $p < .05$, ** $p < .001$