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The impact of common factors on coaching outcomes

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a International Centre for Coaching and Mentoring Studies, Oxford Brookes University, Oxford, UK; b Ashridge Centre for Coaching, Hult International Business School, Ashridge, UK; c Center for Coaching, VU University, Amsterdam, Netherlands; d Oxford Brookes Business School, Oxford Brookes University, Oxford, UK; e Human Resources and Organisational Behaviour Department, University of Greenwich, London, UK

ABSTRACT

Previous studies examining coaching outcomes generally rely on cross-sectional data which limits our understanding of the enduring and long-term effects of coaching. To address this issue, this study, based on longitudinal data, explores several popular variables associated with coaching outcomes. The study is underpinned by Lambert’s (1992). Lambert, M. J. (1992). Psychotherapy outcome research: Implications for integrative and eclectic therapists. In J. C. Norcross, & M. R. Goldfried (Eds.), Handbook of psychotherapy integration (pp. 94–129). Basic Books] four-factor model of common factors and recognises them as variables which are customary to all coaching approaches contributing to coaching outcomes. The study considers stress, wellbeing, resilience, goal attainment and coaching effectiveness as coaching outcomes. Working alliance mediates the impact of self-efficacy, outcome expectations; and perceived social support which are regarded as the predictors of the coaching outcomes. The results indicate that social support predicts working alliance, and working alliance in turn predicts wellbeing and coaching effectiveness over time. The findings suggest that it is vital for coaches to monitor changes in the coachees’ social networks and their working alliance since these have a significant bearing on the effectiveness of the sessions and the coachees’ wellbeing.

Practice points

- Coaches need to focus on a person’s perceived ability, predisposition or capability to form a satisfactory relationship with the coach.
- It is important for coaches to monitor changes in alliance during sessions as working alliance is linked to coachees’ wellbeing.
- Coaches need to be aware of the role and importance of coachees’ perception of their social support.

Introduction

The identification of common factors has been one of the most significant discoveries in the outcome therapy research (Bergin, 1982). Lambert’s (1992) four-factor model of
change, based upon his meta-analysis of forty years of psychotherapy outcome research, consists of estimated percentages of variance in outcome that each factor contributes to change in the therapeutic process (Thomas, 2006). The four-factor model is composed of: 

- **extra-therapeutic change** (estimated to comprise 40% of improvement that occurs in a treatment);
- **therapeutic relationship** (30% of improvement);
- **expectancy, hope and placebo** (15%); and techniques (15%). Lambert’s (1992) findings were later confirmed by Cuijpers et al.’s (2012) study, whose meta-analysis of 280 randomised trials on adult depression found similar estimates for commons factors.

However, both Lambert’s (1992) and Cuijpers et al.’s (2012) figures were hypothesised percentages and as such they should be considered as merely suggestions. They did not offer any explanation as to how the therapy outcomes were measured in the reviewed cases and referred to outcomes as ‘improvement in clinical outcomes’, ‘positive outcomes’, ‘inferior outcomes’ or ‘favorable outcomes’. There is also a limited consensus and consistency in the coaching literature with respect to measurements of coaching outcomes (de Haan & Duckworth, 2013; Jones et al., 2016). Coaching outcomes that have been used in the coaching studies are: (1) mental well-being (de Haan et al., 2019; Grant et al., 2009; Green et al., 2006; Spence & Grant, 2007), (2) goal attainment (Grant et al., 2009; Grant et al., 2006; Spence & Grant, 2007), (3) stress (Grant et al., 2009; Gyllensten & Palmer, 2005), (4) resilience (de Haan et al., 2019; Grant et al., 2009; Green et al., 2007) and coaching effectiveness (de Haan et al., 2019).

de Haan et al. (2013) suggest that common factors are central to psychotherapy effectiveness and as such should be incorporated into coaching effectiveness research. This paper refers to a specific part of a larger coaching effectiveness project to address de Haan et al.’s (2013) call by providing empirical evidence of the longitudinal impact of common factors, as identified by Lambert (1992), in relation to outcomes, such as well-being, goal attainment, stress, resilience and coaching effectiveness. Measures we used for Lambert’s (1992) common factors in the article are working alliance as a therapeutic relationship measure; perceived social support as an extra-therapeutic change measure; self-efficacy, outcome expectations and hope as an expectancy, hope and placebo measure.

**Coaching relationship: working alliance**

Despite different taxonomies of common factors (de Haan & Duckworth, 2013), the general consensus is that the coaching relationship is the most important predictor of coaching outcomes (de Haan et al., 2011; Ely et al., 2010; Visser, 2010). Grassman et al.’s (2020) recent meta-analysis synthesised 27 studies (N=3563 coaching processes) and found a significant positive overall aggregated correlation between working alliance and coaching outcomes. Grassman and Schermuly’s (2020) systemic review of the drivers of working alliance also supports the idea that working alliance plays a key role in coaching processes. The literature also supports the mediating role of working alliance between coaching and outcomes (Baron & Morin, 2009; Byrd et al., 2010). The most recent systemic review by Baier et al. (2020) confirms alliance as a mediator of change. Therefore, we conceptualise working alliance as a mediator in our model.

The first quantitative study into working alliance in coaching was conducted by Baron and Morin (2009) who analysed 31 coach-coachee pairs in a large manufacturing
company and found that the working alliance plays a mediating role in the association between the number of coaching sessions received and development of a manager’s self-efficacy. Berry et al. (2011) found no significant relationship between working alliance and client problem resolution change for the face-to-face coaching, but they found a significant relationship between working alliance and reported client problem resolution change in the distance condition. de Haan et al. (2016) found a positive relationship between coachees working alliance and coaching effectiveness. They also found that the coachee self-efficacy was positively related to working alliance. Most recently, Zimmermann and Antoni (2020) conducted a longitudinal coaching study, using several points of measurement over time, and measured coaching relationship for 52 coaching pairs and found that a small but significant link between working alliance and outcomes.

Almost all previous quantitative investigations into working alliance have demonstrated major design weaknesses, such as (1) small sample size (Baron & Morin, 2009); (2) limited coaches’ experience of coaching (Baron & Morin, 2009); (3) a one-time measure of working alliance (at the end of the coaching process) (Baron & Morin, 2009; de Haan et al., 2016); (4) retrospective design (Berry et al., 2011); or (5) correlational design (de Haan et al., 2016).

To address these limitations this study employs a more robust and longitudinal research design (eight time points) with a larger sample. This enables us to examine the predictive relationship between working alliance and coaching outcomes. First, we hypothesise that working alliance predicts coaching outcomes:

*Hypothesis 1.* Working alliance predicts wellbeing, resilience, goal attainment, perceived stress and coaching effectiveness.

**Extra-therapeutic change: social support**

Second, using Lambert’s (1992) meta-analysis as the basis for our conceptual framework (see Figure 1), we empirically test whether extra-therapeutic change, conceptualised as social support, contributes to working alliance and coaching outcomes. Lambert’s (1992) meta-analysis found the extra-therapeutic change, defined as ‘fortuitous events and social support’ (p. 97) to have the biggest impact on the successful outcomes. Extra-therapeutic factors have not been explored in enough detail in outcome research (Sprenkle et al., 1999). However, two recent studies into extra-therapeutic factors by Leibert and Dunne-Bryant (2015) and Roehrle and Strouse (2008) found social support

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**Figure 1.** Conceptual framework working alliance in coaching.
as a statistically significant extra-therapeutic factor (d = 0.22). Most recently, de Haan et al. (2019) conducted a three time-point RCT study over a period of 14 months, with 89 female leaders in the coached group and 72 in the control group, to examine the impact of executive coaching in a global healthcare company. They found perceived social support to be a predictor of the working alliance. Social support is considered to be stable over time despite changes in social circumstances (Sarason et al., 1986; Shaw et al., 2004). We hypothesise that:

**Hypothesis 2.** Social support predicts wellbeing, resilience, goal attainment, coaching effectiveness and perceived stress, via working alliance.

### Expectancy, hope and placebo: self-efficacy, outcome expectations and hope

Third, we empirically test the impact of 'expectancy, hope and placebo' on working alliance and coaching outcomes. We use general self-efficacy, outcome expectation and hope as proxy measures. We measure self-efficacy and outcome expectations as two distinct constructs (Maddux et al., 1982; Pintrich & Schunk, 1996). **General self-efficacy** is the belief in one’s competence to cope with a broad range of stressful or challenging demands (Luszczynska et al., 2005). General self-efficacy has been confirmed as a predictor of coaching effectiveness (de Haan et al., 2013, 2016, 2019; Stewart et al., 2008) and coaching outcomes (Pandolfi, 2020). General self-efficacy is considered to be stable over time (O'Rourke & Hampson, 1999) as it crystallises by adolescence or young adulthood and is resistant to later environmental influences (Jerusalem & Mittag, 1995). We hypothesise that:

**Hypothesis 3a.** General self-efficacy predicts coaching effectiveness, wellbeing, resilience, goal attainment, coaching effectiveness and perceived stress, via working alliance.

**Outcome expectations** are concerned with expectations that a person can achieve planned goals (Bandura, 1977). A review into active ingredients in executive coaching (Pandolfi, 2020) found that coachee’s expectations about coaching effectiveness influence coaching outcomes. The importance of expectations in a context of a treatment success was discussed by many researchers (Frank 1961; Frank et al., 1963; Marcia et al., 1969) and by Delsignore and Schnyder’s (2007) whose meta-analysis found that client positive expectations had a positive impact on successful therapeutic outcomes. However, there are many issues with regard to measuring expectations. Constantino et al.’s (2011) meta-analysis of 8,016 patients across 46 samples identified 67.4% of cases with inadequate outcome expectation measures, namely using one-item scales; using measures that confounded expectancy with other constructs; or using scales that confounded outcome and treatment expectations. Moreover, expectations are often treated in the psychotherapy literature as placebo (Price et al., 2008; Wampold & Imel, 2015) or an error variance (Weinberg & Rasco, 2007). However, in order to capture a placebo effect the study design requires subjects to not be aware whether they receive treatment or not (Vase et al., 2002; Wampold & Imel, 2015). In the absence of coaching or psychotherapy studies into temporal stability of outcome expectations we followed Kamper et al.’s (2014) study into stability of recovery outcome expectations in 874 patients with back pain over 3 months that found the recovery expectations temporally stable. We hypothesise that:
Hypothesis 3b. Outcome expectations predict coaching effectiveness, wellbeing, resilience, goal attainment, coaching effectiveness and perceived stress, via working alliance.

Finally, we empirically test the impact of hope on working alliance and coaching outcomes. Hope is defined as a person’s expectations about his/her ability to attain important goals (Snyder, 2002). Frank (1961) found that a person entering therapy is in a ‘demoralised’ state and a role of the therapist is to provide hope. However, according to O’Hara (2010) hope is a neglected common factor in outcome therapy research. The construct of hope is conceptualised as a temporally stable cognitive set reflecting general rather than specific outcome expectancies (Edwards et al., 2007; Snyder et al., 1991). We hypothesise that:

Hypothesis 3c. Hope predicts coaching effectiveness, wellbeing, resilience, goal attainment, coaching effectiveness and perceived stress, via working alliance.

Materials and methods

Study design, sample selection and description.

We collected survey data at eight time points and administered it via Qualtrics software. Respondents were given a unique password which gave them access to complete each survey. The baseline survey, that collected all independent variables (except working alliance as it was only collected after coaching started) and demographic information, was emailed to all study participants (and reserves) in October 2017. As soon as participants from the experimental group completed the survey they were randomly matched with a coach, introduced to each other via email and asked to arrange their first coaching session by the end of October 2017. The six-time points’ surveys were administered immediately after each of the monthly coaching sessions (or, for the control group, when 40–50% of the experimental group participants’ coaching sessions had taken place). The eighth and final time point of data collection was sent exactly three months after the seventh questionnaire had been sent out, following a three-month coaching free period. The surveys administered at time points two to eight were identical in content across time but differed slightly for experimental and control groups, the former receiving some additional questions about their relationship with their coach, and the outcomes of their sessions.

A total of 113 students from the coaching group completed the survey at the beginning of the coaching programme were selected for this project and further analysis. Statistical analyses were performed using SPSS version 26. The age ranged from 18 to 56 with a mean of 23.20. More female students (71.7%) participated in the study than their male counterparts (28.3%). In terms of the respondent’s nationality, most of the respondents identified as British (38.1%) and the remaining students came from several other countries like Italy, Nigeria, Romania, and the Philippines.

Measures

Baseline survey online variables (independent variables and demographic information)

Hope was measured by Adult Hope Scale (AHS; Snyder et al., 1991). Expectancy was measured using two distinct instruments designed to tap into separate dimensions of
the construct: General Self-Efficacy (Schwarzer & Jerusalem, 1995) and Credibility/Expectancy (Devilly & Borkovec, 2000). Extra-therapeutic change was measured by a proxy measure, Perceived Social Support (Zimet et al., 1988). All measures were only measured once at the baseline as these constructs are temporally stable. Hence, we assumed that they would stay the same over time. The aggregate scores for the baseline constructs are reported in Table 1. The Cronbach’s alpha is used as the indicator of reliability of the scale and should ideally be above .70 (DeVellis, 2017). The Cronbach’s alphas for all the baseline constructs range from .791 to .893, which indicates that the items are internally consistent and that the scales are reliable.

Repeated survey measures. We collected our outcome measures, psychological well-being, resilience, perceived stress and goal attainment at each time point for all students, along with working alliance for the coached group only.

Psychological well-being was measured using the short version of the Warwick-Edinburgh Mental Well-being Scale (Stewart-Brown et al., 2009; Tennant et al., 2007). Resilience was measured using the Brief Resilience Scale (Smith et al, 2008). Coaching Effectiveness was measured using the 4-item scale (de Haan et al., 2016) that measures a client’s perception of how effective coaching was in creating reflective space, new insights, new actions and behaviour as well as the success of the coaching journey. Perceived Stress was measured using the 4-item short-form of the Perceived Stress Scale (PSS) of Cohen et al. (1983), which measures the degree to which a person evaluates situations in his/her life as stressful. The short version of Horvath’s Working Alliance Inventory Scale (Horvath & Greenberg, 1989), adapted to coaching by de Haan et al. (2013), was used to measure Working Alliance. This 12-item instrument consists of three subscales: Task, Goal and Bond. Goal Attainment was measured using a Goal Attainment Scale (Spence, 2007), adapted from Grant et al. (2009). The overall goal attainment index is calculated by multiplying the goal’s difficulty rating by the degree of success. The aggregate scores for repeated outcome measures over time are presented in Table 1. The Cronbach’s alphas for the repeated outcome measures range from .770 to .922 indicating that the items are internally consistent and that the scales are reliable over time.

**Results**

Simple linear regression analysis was used to test hypothesis 1 and the standardised regression coefficients are reported in Table 2 and Figure 2. The results indicate that Working Alliance is a good predictor of Wellbeing (.25 < β < .46) and Coaching

**Table 1. Descriptive statistics baseline and repeated measures.**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cronbach’s Alpha</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hope</td>
<td>791</td>
<td>5.35</td>
<td>.90</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>.805</td>
<td>3.10</td>
<td>.41</td>
</tr>
<tr>
<td>Outcome Expectancy</td>
<td>.871</td>
<td>6.40</td>
<td>1.40</td>
</tr>
<tr>
<td>Perceived Social Support</td>
<td>.893</td>
<td>5.08</td>
<td>1.07</td>
</tr>
<tr>
<td>Psychological Well-being</td>
<td>.877</td>
<td>3.67</td>
<td>.72</td>
</tr>
<tr>
<td>Resilience</td>
<td>.770</td>
<td>3.42</td>
<td>.70</td>
</tr>
<tr>
<td>Coaching Effectiveness</td>
<td>.942</td>
<td>5.95</td>
<td>1.28</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>.812</td>
<td>2.81</td>
<td>.84</td>
</tr>
<tr>
<td>Working Alliance</td>
<td>.915</td>
<td>6.23</td>
<td>.83</td>
</tr>
<tr>
<td>Goal Attainment</td>
<td>NA</td>
<td>29.87</td>
<td>16.38</td>
</tr>
</tbody>
</table>
Effectiveness (.26 < β < .76) over time. The effect of Working Alliance on Stress (−.22 < β < .03) indicates the mitigating effect over time but the effect is not statistically significant. Partial statistically significant results are found for Goal Attainment (.03 < β < .26) at times 5 and 8. The effect of Working Alliance on Resilience was found only to be statistically significant at time 7 (β = .27) while not being statistically significant at other times (−.15 < β < .16). These results partially support Hypothesis 1 in that Working Alliance predicts two coaching outcomes Wellbeing and Coaching Effectiveness over time and is associated with Goal Attainment and Resilience at the later stages of coaching. The findings demonstrate that investing in a robust working alliance will positively impact on the coachee’s wellbeing and improve the perceived effectiveness of coaching over time. Despite the mitigating effect, there is no support found for Working Alliance as a predictor for Perceived Stress over time. Although the effects of working alliance on the other coaching outcomes are mostly in the expected direction, they are only partially supported, future studies may want to examine the intermittent results.

Hypotheses 2–3 were tested using multiple regression analysis and the standardised regression coefficients are presented in Table 3 and Figure 2. The variance inflation factor scores confirm that multicollinearity is not an issue (1.07 < VIF < 2.21). The results of the regression indicate that the model explains up to 12% of the variance (.07 < R² < .12; .03 < Adj. R² < .07) and that the model is not a significant predictor of Working Alliance over time, except for time 5 F(4,91) = 2.62, p = .04. Regression results indicate that only Social Support is a statistically significant predictor of Working Alliance (.23 < β < .33) over time. The remaining three predictors Self-Efficacy (−.06 < β < .18), Outcome Expectations (−.07 < β < .15) and Hope (−.17 < β < .09) did not show the anticipated impact on Working Alliance over time.

The results partially support Hypotheses 2 in that Social Support is positively associated with Working Alliance. However, the regression results do not support hypotheses 3a, 3b and 3c. The remaining three predictors of Self-Efficacy, Outcome Expectations and Hope have no effect on Working Alliance over time. Further detailed information regarding the statistical analysis is available upon request.

Discussion

Common factors as predictors of coaching outcomes

The working alliance is considered to be the best predictor of outcomes both in therapy (Martin et al., 2000; McKenna & Davis, 2009) and in coaching (Grassman et al., 2020). Grassman et al.’s (2020) recent meta-analysis shows that working alliance has a moderate and consistent overall relationship with coaching outcomes (r = .41, 95% CI [,34, .48], p < .001) such as goal attainment and wellbeing. Previous studies also found links between

<table>
<thead>
<tr>
<th>Table 2. Effect of working alliance on coaching outcomes.</th>
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</thead>
<tbody>
<tr>
<td>Working Alliance →</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>T2 T3 T4 T5 T6 T7 T8</td>
</tr>
<tr>
<td>Wellbeing .25*</td>
</tr>
<tr>
<td>Stress .03</td>
</tr>
<tr>
<td>Goal Attainment .13</td>
</tr>
<tr>
<td>Resilience −.15</td>
</tr>
<tr>
<td>Coaching Effectiveness .52*</td>
</tr>
<tr>
<td>Note: * p &lt; 0.05 (Std. Coefficients Beta).</td>
</tr>
</tbody>
</table>
coaching and resilience (Grant et al., 2009) and perceived stress (Grant et al., 2009; Gyllensten & Palmer, 2005).

Our results indicate that working alliance predicts wellbeing and coaching effectiveness over time, however, we found no support for goal attainment, resilience or perceived stress. Grassman et al. (2020) suggest that working alliance may be more strongly related to affective coaching outcomes but less to results outcomes, such as goal attainment, which is a more specific coaching outcome. In addition, although working alliance correlates with coaching outcomes at different time points, early working alliance (WAI) does not correlate with an increase in coaching outcomes. This suggests that working alliance is important in terms of a general readiness for coaching, i.e., for initial or average values of outcome, but not for the impact, the effectiveness of the coaching intervention itself (de Haan et al., 2019).

The discrepancy between our findings and the coaching literature can be explained by the fact that previous coaching studies are mostly based on cross-sectional data with no longitudinal design (Grassman & Schermuly, 2020; Zilcha-Mano, 2017). As most coaching working alliance studies (Baron & Morin, 2009; Berry et al., 2011) attempt to correlate working alliance with outcomes at one-time point (at the end of coaching), there is the possibility that some of the predicted change has already occurred prior to the point the alliance being assessed (Klein et al., 2003). It is also possible that working alliance inventory measures a ‘trait-like’ component of alliance, i.e., a coachee’s general tendency and ability to form satisfying relationships with others which, in turn, affect also the coaching relationship and predicted outcomes. Coachees who are more capable to form a strong and satisfying relationships with others will be more likely have a better chance of forming a strong alliance with their coach and to benefit from coaching (Zilcha-Mano, 2017).

Our study found that social support, our proxy measure for Lambert’s (1992) extratherapeutic change, is a statistically significant predictor of working alliance. This is

<table>
<thead>
<tr>
<th>Table 3. Effect of predictors on working alliance.</th>
</tr>
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<tbody>
<tr>
<td>→ Working Alliance T2  T3  T4  T5  T6  T7  T8</td>
</tr>
<tr>
<td>Social Support .26* .24* .33* .28* .28* .25* .23*</td>
</tr>
<tr>
<td>Self-Efficacy .11  .10  -.04  .02  -.06  .07  .18</td>
</tr>
<tr>
<td>Outcome Expectations -.03  -.07  .06  .15  .05  .01  .12</td>
</tr>
<tr>
<td>Hope -.10  -.07  -.05  -.01  .08  .09  -.17</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 (Std. Coefficients Beta).

Figure 2. Working alliance in coaching.

Note: Solid arrow = p < .05; Dashed arrow = not significant, across all time periods.
consistent with the most recent study by de Haan et al. (2019) who also found perceived social support to be a predictor of the working alliance. However, despite psychotherapy research claiming that extra-therapeutic change, understood as a client and his/her environment, is the single and most potent contributor to the success of the therapy (Cuijpers et al., 2012; Lambert, 1992; Miller et al., 1997; Wampold, 2001), there is still a notable absence of coaching outcome studies examining the impact of extra-therapeutic change on outcomes.

We found no evidence for self-efficacy, outcome expectations and hope to predict any coaching outcomes, via working alliance, despite Lambert’s (1992) and Cuijpers et al.’s (2012) earlier findings. There seem to be hardly any outcome studies that empirically test their impact on coaching outcomes (O’Hara, 2010). There is not much research to support a direct causal relation between outcome expectations and favourable treatment outcomes and, equally, manipulation studies involving outcome expectations (Constantino et al., 2011). In recent years, only a small number of studies have looked at outcome expectations in the organisational context (Fridrich et al., 2016), however not in a coaching context.

Hope, self-efficacy and outcome expectations can be considered as internal factors which do not seem to impact working alliance over time. Perceived social support can be considered as an external factor and refers to relationships, friendships and social network. The results indicate that those who perceive social support from family, friends or a special person tend to have a stronger working alliance with the coach over time. It is likely that individuals who find themselves supported by a social network are more capable in maintaining connections and benefit from the coaching sessions in terms of their wellbeing and perceive greater coaching effectiveness.

Theoretical and practical implications and suggestions for future research

Our findings indicate that in order to increase coaching effectiveness and wellbeing, coaches are recommended to improve their working alliance with their coachee via focusing on improving their client’s perceived social support. This can be done by acknowledging clients’ existing social support network in terms of having a special person and family to get support from. Strengthening their sense of perceived social support can be done by exploring and recognising whether the clients have support in times of need, people to share joys and sorrows with, to discuss problems with and to talk through feelings and decisions (Zimet et al., 1988).

Following Zilcha-Mano (2017), we also suggest that coaching alliance-outcome research, similarly to the psychotherapy research, needs to investigate a trait-like component of the alliance (a person’s perceived ability, predisposition or capability to form a satisfactory relationship with the therapist) and the state-like component of the alliance (e.g., changes in alliance during sessions) in order to see which component predicts outcomes. Further working alliance and outcome relationship studies, that examine the impact of clients’ characteristics (such as an ability to engage in positive interpersonal relationships), are also needed.

Moreover, coaching outcome research needs to further examine the relationship between extra-therapeutic change, conceptualised as social support and between working alliance and coaching outcomes. Finally, more research is needed to examine a causal relation between outcome expectations and favourable coaching outcomes.
**Limitations**

There are several limitations associated with the study. First, in our study – as in many other coaching studies – we used student samples which may be problematic when generalising from students to the general public or to executive coaching. Second, all our measures were self-scored potentially leading to the same-source bias. Third, a larger sample would have yielded more statistical power. Finally, we only measured perceived social support at the baseline. Given that it was the only common factor that was positively related to changes in working alliance it would be useful to see whether it has increased due to coaching.

**Disclosure statement**

No potential conflict of interest was reported by the author(s).

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*Professor Erik de Haan* PhD is the Director of Ashridge’s Centre for Coaching at Hult International Business School, and Professor of Organisation Development at the VU University Amsterdam, with over twenty-five years of experience in organizational and personal development. His expertise covers process consulting for organizational change, consulting to boards and teams, leading strategic conferences, and executive / team coaching. Erik has an MSc in Theoretical Physics and gained his PhD with his research into learning and decision-making processes in perception. He is a British Psychoanalytic Council registered psychodynamic psychotherapist with an MA in psychotherapy from the Tavistock Clinic; has (co-)authored more than 200 academic and practitioner articles and 14 books; and sits on the editorial board of three journals including the Consulting Psychology Journal. Erik is an Ashridge and ICF accredited coach and supervisor and is qualified to deliver a range of psychometric instruments.
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