



Title Registration for a Systematic Review: E-Mentoring for Improving the Career Planning of Youth (15-24): A Systematic Review

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TITLE OF THE REVIEW

E-Mentoring for Improving the Career Planning of Youth (15-24): A Systematic Review

BACKGROUND

In 2012, the International Labour Organization, a specialised agency of the United Nations (UN), adopted a resolution calling for immediate action to tackle the youth unemployment crisis (International Labour Office [ILO], 2012). The UN defines ‘youth’ as all persons between the ages of 15 and 24 years; ‘unemployed youth’ comprise those within this age range who are without work, but are currently available for and actively seeking work (Youth Employment Network, 2011). In 2013, the global youth unemployment rate stood at an estimated 12.6%, representing 73.4 million young people (ILO, 2013). This rate is expected to rise to 12.8% by 2018 (ILO, 2013).

Youth are almost three times more likely to be unemployed than adults aged 25 years or older, and the newest entrants to the labour market tend to be at the back of the ‘job queue’ (ILO, 2013, p. 1-3). Under-skilled and under-educated youth are at an increased risk of unemployment. However, youth who are over-educated and over-skilled are also at risk because of the general mismatch between the skills and education levels of youth seeking employment and existing job opportunities (ILO, 2012). Globally, young females tend to be more at risk of unemployment (ILO, 2013), but this varies between countries. Youth with disabilities and/or special needs are at a high risk of unemployment, facing additional barriers from discrimination and prejudice (World Health Organization & the World Bank, 2011). At age 24, there is an estimated 36% gap between the employment rates of disabled and non-disabled young people (Disability Rights UK, 2013).

Youth unemployment has been described as causing “scarring effects” (ILO, 2013, p. 2). Many unemployed youth are already from disadvantaged backgrounds, and are a ‘generation at risk’ for the long-term negative impacts unemployment can have on future earnings, employment prospects, health, happiness, and job satisfaction (Bell & Blanchflower, 2011; ILO, 2013; Morsy, 2012). More broadly, youth unemployment is associated with poverty, social exclusion, juvenile delinquency, and distrust in political and welfare systems (Morsy, 2012).

There is no one-size-fits-all approach to resolving the youth unemployment crisis (ILO, 2012), but organisations such as the G20 Task Force on Employment, created in 2011, and the International Labour Organization, have developed recommendations to assist governments in taking action. One key recommendation is to consider programmes proven effective in facilitating successful school-to-work transitions, through providing career guidance to students to help them develop employment plans, gain work experience, and match skills and qualifications to goals (ILO, 2012). Mentoring programmes are widely used in supporting youth and show promise (DuBois, Portillo, Rhodes, Silverthorn, & Valentine,

2011). Currently there are over 5,000 mentoring programmes in the United States serving an estimated three million youth (DuBois et al., 2011), and youth mentoring programmes form a substantial proportion of the 3,500 mentoring schemes operating in the United Kingdom (Meier, 2008). However, a substantial gap exists between the demand of youth needing or wanting mentors, and the supply of mentors and accessibility of face-to-face mentoring programmes (Bruce & Bridgeland, 2014).

Increasingly, practitioners are using electronic mentoring ('e-mentoring') programmes to close this gap. Also referred to as online mentoring, virtual mentoring, and telementoring, e-mentoring makes use of distance communication technologies, such as e-mail or video messaging, to facilitate some, if not all of the communication between each mentor and mentee. It was in 1993 that the first large-scale e-mentoring programme- the 'Electronic Emissary Project'- was founded, which enabled students and teachers to be mentored by subject-matter experts primarily via e-mail (Shpigelman, 2014; Single & Single, 2005). Since then, formal e-mentoring programmes have rapidly emerged as a popular intervention strategy, but they continue to be associated with a mix of opportunities and challenges (Ensher, Heun, & Blanchard, 2003; Shpigelman, 2014). For example, e-mentoring may make establishing and sustaining relationships easier, not being wholly dependent on sharing time or space (Ensher et al., 2003, p. 281). Moreover, demographics such as age, race, and gender may be less visible (Bierema & Merriam, 2002), especially in text-based, computer-mediated communication only (CMC-only) relationships, allowing commonalities and shared interests to be built upon more immediately (Ensher et al., 2003, p. 281). Conversely electronic communication, particularly without audio/video tools, may be a "cold medium", as participants cannot read body language or hear tone of voice (p. 276). Text-based CMCs may also suffer with miscommunication or misinterpretation (p. 276), exacerbated by time lags between messages, and possible harmful effects may not be as easily noticed relative to face-to-face communication. Further, the need for computer-mediated communication and literacy skills may restrict accessibility for some and risk widening the 'digital divide'.

As a result, a systematic review is necessary to help guide governments, organisations, and practitioners as to whether e-mentoring programmes for youth are effective and a worthwhile investment, and importantly whether there may be any risk of harm.

OBJECTIVES

The main objective of this review is to answer the question: 'what are the impacts of text-based, computer-mediated communication only (CMC-only) e-mentoring on the career planning of youth enrolled in school, college, university, or another formal education setting, compared to no mentoring and face-to-face mentoring?' As secondary outcomes, 'what are the impacts on youth's self-esteem and self-efficacy?'

EXISTING REVIEWS

Traditional, face-to-face youth mentoring has been rigorously evaluated. Generally, systematic reviews and meta-analyses have found this form of mentoring to have small positive effects for young people, for example: an overall effect of $g=0.21$ across behavioural, social, emotional, and academic domains (DuBois et al., 2011); an overall effect of $d=0.18$, with a range of $d=0.10$ for emotional/psychological outcomes to $d=0.22$ for career/employment outcomes (DuBois, Holloway, Valentine, & Cooper, 2002).

However, some have found non-significant or adverse effects. In a systematic review and meta-analysis of adolescent school-based mentoring (Wood and Mayo-Wilson, 2012), the magnitude of effects across all outcomes were clinically unimportant, with the largest close to zero: $g=0.09$ for self-esteem. In Grossman & Rhodes' (2002) re-analysis of data from a study of 1,138 adolescents randomised to the 'Big Brothers Big Sisters' mentoring programme or a control condition, adolescents with mentor matches terminating within three months suffered significant declines in self-worth ($p \leq .01$) and perceived scholastic competence ($p \leq .05$). Whilst one-to-one adult-to-youth and (older) peer-to-youth mentoring relationships have shown comparable levels of effectiveness (DuBois et al., 2011), there is evidence from some controlled studies that peer-group interventions may have iatrogenic effects (Dishion, McCord, & Poulin, 1999). Some reviews, furthermore, have excluded studies of youth and mentors with 'major' disabilities (e.g., Eby, Allen, Evans, Ng, & DuBois, 2008).

Evidence on e-mentoring's effectiveness for youth is less clear. Most discussions have been speculative or not based upon best evidence (Shpigelman, 2014), and e-mentoring programmes have been associated with a mix of opportunities and challenges (Ensher et al., 2003). To the best of the authors' knowledge, this will be the first systematic review of the empirical evidence on the effectiveness of e-mentoring for improving youth's career planning.

INTERVENTION

Type of intervention

Traditional mentoring relationships are "nurtured by frequent face-to-face contact" (Hamilton & Scandura, 2003, p. 388); e-mentoring takes place at least partially via computer-mediated communication (CMC). CMC was originally defined as "a form of electronic written communication" (Shpigelman, 2014, p. 259) and was asynchronous-communication "not dependent on the physical presence" of users (p. 260). This includes for example, e-mail, discussion boards, and web forums. Messages may not be sequential, and users can respond at different times. With technological advances, CMC now includes synchronous text-based communication, such as instant messaging and chat rooms, whereby

“the users are present and respond in real time” (Shpigelman, 2014, p. 260), and multimedia modes of communication such as Skype, which use audio and/or video tools.

The amount of CMC in a programme dictates the degree to which e-mentoring exists (Hamilton & Scandura, 2003). In its ‘purest’ form, e-mentoring is CMC-only: the mentoring is text-based, and done “only online by e-mail, websites, chat-rooms, instant messaging, etc.” (Ensher et al., 2003, p. 273), and therefore participants do not need to be co-located. The next two types, CMC-primary and CMC-supplemental, are “hybrid” forms of mentoring (p. 278). With CMC-primary relationships, “the majority of mentoring interactions (i.e., more than 50%) are conducted online”, but may also be supplemented by telephone calls and face-to-face interactions (p. 273), as well as other multimedia tools (Shpigelman, 2014, p. 261). In CMC-supplemental relationships, “the majority of mentoring is done in person yet the relationship is supplemented via emails, instant messaging, chat-rooms, websites, and so forth” (Ensher et al., 2003, p. 274).

To be eligible for this review, studies should evaluate the efficacy of a CMC-only e-mentoring programme. A programme will be defined as a ‘CMC-only e-mentoring programme’, whether or not the terms ‘e-mentoring’, ‘mentor’, or ‘mentee’ are used, if: (a) each mentee was assigned one mentor; (b) the ‘mentor’ was a more experienced or older adult or peer (e.g., an industry professional, or in a higher level of education), voluntary or paid, but not acting in their professional capacity with the mentee (e.g., the mentor may be an educator, but not their mentee’s teacher); (c) the ‘mentee’ was a younger or less experienced youth aged 15-24 and enrolled in school, college, university, or another formal education programme; (d) the mentor was tasked with providing guidance and support to the mentee; (e) the formal e-mentoring programme planned for all communication between the mentor and mentee, until the end of the programme, to be ‘CMC-only’, from any location. Programmes can include input from a third party, such as a programme coordinator, to monitor communications and/or send coaching messages, for example.

Studies of CMC-primary and CMC-supplemental programmes are excluded. As ‘hybrid’ forms of mentoring, these programmes include a mix of text-based online communication as well as face-to-face, audio and/or video communication, so they may work differently to CMC-only programmes, which use online text-based communication only (Ensher et al., 2003). Additionally, because CMC-primary and CMC-supplemental programmes can contain elements of face-to-face contact, they cannot be optimally informative in assessing the effects of *electronic* mentoring specifically, which is the primary focus of this review.

Types of comparators

Studies should have at least one control group that received: (1) no formal mentoring programme; or (2) received a formal face-to-face mentoring programme, which will be defined the same way as a CMC-only e-mentoring programme except for the mode of communication, which should be in-person, face-to-face.

Absolute effects (i.e. the effects of e-mentoring vs. no mentoring) and relative effects (i.e., the effects of e-mentoring vs. face-to-face mentoring) are to be separated in the review's analysis, as recommended (Littell, Corcoran, & Pillai, 2008, p. 38-39).

POPULATION

The population of this review includes youth aged 15-24, enrolled in school, college, university, or another formal education programme/establishment, including youth with disabilities and/or special needs.

OUTCOMES

The primary outcome is 'career planning'. This includes: career support, career certainty and indecision, work experience, job searching, job applications, and other related outcomes. Studies should include at least one measure of the review's primary outcome at any time point. Objective and subjective measurements are eligible.

Secondary outcomes include 'self-esteem', defined as 'a judgment of self-worth', and 'self-efficacy', defined as 'a judgment of capability'. All measures are eligible, including those that are general/global in orientation and those that are focused on specific domains, such as career planning.

Only the pre-specified outcomes are to be extracted.

STUDY DESIGNS

This review will include randomised or quasi-experimental designs with a prospectively assigned, contemporaneous control group. Quasi-experimental studies need to use matching or statistical methods to ensure that the control group was similar to intervention group at baseline. Searches will be limited to studies reported since 1993, when the first large-scale e-mentoring programme was founded. Studies will not be restricted by country. Non-English language studies will be excluded, but the number retrieved noted. Studies do not have to appear in peer-reviewed journals.

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ROLES AND RESPONSIBILITIES

- **Content expertise:** David L. DuBois (DLD) has extensive knowledge of youth mentoring programmes and related research. He is the lead author two previous meta-analytic reviews of youth mentoring programme effectiveness and is lead editor of the Handbook of Youth Mentoring (Sage Publications), now in its second edition. Robyn M. O'Connor (RMO) conducted original research on youth mentoring, and e-mentoring specifically, as part of her M.Sc. in Evidence Based Social Intervention at the University of Oxford.
- **Systematic review methods & statistical analysis:** DLD has experience leading meta-analyses, and is knowledgeable regarding all major facets of meta-analytic methods and their application. He also teaches a doctoral level course in research synthesis and meta-analysis. Lucy Bowes (LB) has co-authored systematic and meta-analytic reviews in high-impact journals, is an epidemiologist, and uses advanced statistical methods in her studies, which have been published in leading international journals. She has supervised graduate projects on systematic reviews and taught statistics to both undergraduate and graduate students at the University of Oxford. RMO received training in research methods and statistics from the Department of Social Policy and Intervention at the University of Oxford. She conducted a systematic review in partial fulfillment of her M.Sc. for which she received a Distinction, and has worked as a research assistant on a systematic review and meta-analysis at the University of Oxford.
- **Information retrieval:** DLD is knowledgeable regarding methods of information retrieval and experienced with their application. RMO has experience of information retrieval from her M.Sc. research, and has worked as a research officer in academic and applied research settings.

POTENTIAL CONFLICTS OF INTEREST

As noted above, DLD has been involved in prior published reviews of youth mentoring programmes. However, these reviews did not address the effectiveness of CMC-only e-mentoring programmes, the focus of this review. RMO and LB are not aware of any potential conflicts of interest. All authors will strive to interpret the results without prejudice or bias.

FUNDING

None.

PRELIMINARY TIMEFRAME

- **Date plan to submit a draft protocol:** By 28th February 2015
- **Date plan to submit a draft review:** By 31st May 2015

DECLARATION

Authors' responsibilities

By completing this form, you accept responsibility for preparing, maintaining, and updating the review in accordance with Campbell Collaboration policy. The Coordinating Group will provide as much support as possible to assist with the preparation of the review.

A draft protocol must be submitted to the Coordinating Group within one year of title acceptance. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

You accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review every five years, when substantial new evidence becomes available, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group.

Publication in the Campbell Library

The support of the Coordinating Group in preparing your review is conditional upon your agreement to publish the protocol, finished review and subsequent updates in the Campbell Library. Concurrent publication in other journals is encouraged. However, a Campbell systematic review should be published either before, or at the same time as, its publication in other journals. Authors should not publish Campbell reviews in journals before they are ready for publication in the Campbell Library. Authors should remember to include a statement mentioning the published Campbell review in any non-Campbell publications of the review.

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Form completed by: Robyn M. O'Connor

Date: 11th January 2015