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Abstract

Informed by a goal setting and self-regulation perspective, we tested a model of perceived career goal-progress discrepancies (i.e., perception of progress made towards achieving career goals relative to where one should be if the goals were to be attained), which proposed that negative feedback from significant others predicts career goal-progress discrepancies, which, in turn, predicts levels of career-related distress. The model also proposes that active feedback seeking strengthens the relationship between feedback from significant others and goal-progress discrepancies, and that career self-regulatory behaviours (career exploration and planning) weakens the relationship between career goal-progress discrepancies and career distress. Using a sample of 420 young adults (mean age = 20.3 years, 73% female), we found that feedback from significant others was related to both career goal-progress discrepancies and career distress, career goal-progress discrepancies were related to career distress, and goal-progress discrepancies partially mediated between feedback from significant others and career distress. Supporting the moderated effects, goal-progress discrepancies were higher at higher levels of negative feedback for those more actively seeking feedback, and career distress was lower at lower levels of discrepancy for those more engaged in exploration and planning.

Keywords: perceived career goal-progress discrepancy; feedback from significant others; active feedback seeking; career distress; career exploration; career planning

Antecedents and Consequences to Perceived Career Goal-Progress Discrepancies

Young adults face a great many challenges during the transition from formal schooling to becoming full-time participants in the labour market (Messersmith & Schulenberg, 2010; Evans, 2002). How well they meet these challenges and attain the goals they set for themselves has a large impact on their current and future well-being and success (Seiffge-Krenke & Gelhaar, 2008). Deciding on a career direction and engaging in goal-directed career activities, such as participating in post-secondary training and education and managing work experiences, are important age-appropriate life tasks for young adults (Dietrich, Parker, & Salmela-Aro, 2012). In this career developmental process, young adults face many setbacks and many find that they struggle to meet the goals and tasks required to progress movement towards their career aspirations (Uno, Mortimer, Kim, & Vuolo, 2010). Confronted with discrepancies between how well they are progressing, compared to well they should be, or are expected to be progressing, young adults are faced with decisions about adjusting their goals, and are faced with the disappointment of managing these compromises (Anderson & Mounts, 2012). Despite the pervasive nature of these setbacks (Creed & Blume, 2013), there has been little research examining the correlates of perceived career goal-progress discrepancy.

We tested a control theory model of career development (Carver & Scheier, 1982; Kerpelman, Pittman, & Lamke, 1997) based on perceptions of discrepancies between career aspirations and the progress that is being made towards these aspirations. In this model, negative feedback from significant others is considered an antecedent to perceived goal-progress discrepancies, and career-related distress is considered as an outcome. We also tested under what circumstances the relationship between feedback from significant others and perceived goal-progress discrepancy might be strengthened, and under what circumstances the relationship between perceived goal-progress discrepancy and career distress might be ameliorated. We tested if feedback seeking orientation moderated the relationship between feedback from significant others and perceived goal-progress discrepancy, and tested if career-

related self-regulatory strategies (operationalised as career exploration and planning) moderate the relationship between perceived career goal-progress discrepancy and career distress. See Figure 1.

Perceived Career Goal-Progress Discrepancy

Goals refer to "internally represented desired states", which are constructed hierarchically, with broad, higher-order goals informing middle- and lower-order goals and behavioural sequences (Vancouver & Day, 2005, p. 158). In the career domain, higher-order goals can refer to values related to helping others; middle order goals might include specific career aspirations or choices; lower order goals include undertaking specific career-related training; whereas, behavioural sequences include such activities as completing a college assignment (Praskova, Creed, & Hood, 2013; Rojewski, 2007). Goals serve as reference values or "self-guides", which form the basis for comparison when reflecting on achievements and progress (Higgins, 1987). All goal setting models (e.g., Bandura's [1989] self-regulation model; Carver & Scheier's [1982] control model) are based on the proposition that people set goals (consciously or unconsciously, by themselves or set by others), evaluate the progress they are making towards their goals, and adjust behaviours and/or goals when there is a discrepancy between the goal set and progress achieved. Goal-appraisal can also result in individuals also deciding that they are ahead of where they should be, or on track, to meet the goal. In these circumstances, individuals might raise their goals or reduce or maintain the effort being expended (Bandura, 1991). These discrepancy reduction and production mechanisms, which are based on Festinger's (1957) cognitive dissonance theory, suggest that when goal progress is appraised as discrepant with what is required to attain the goal, the person will modify the energy and resources allocated to achieving it, adjust the goal itself, or do both (Lord, Diefendorff, Schmidt, & Hall, 2010). In this context, perceived goal-progress discrepancy is the individual's perception of the progress they are making towards achieving their goals relative to where they should be if they were going to be attained (Higgins, 1987). Perceived

goal-progress discrepancies are central to goal appraisal processes, which reflect the ways by which people think and feel about, and regulate, their goals and behaviours (Austin & Vancouver, 1996). Little is known about the mechanisms of this component of goal appraisal for deciding upon, regulating, and managing goals within the career domain.

Consequences of Perceived Career Goal-Progress Discrepancy

Discrepancies between where one is and where one wants to be elicit feelings of failure and dissatisfaction, which can motivate withdrawing effort and lowering expectations (Higgins, 1987; Lord et al., 2010). Large negative discrepancies can create severe disturbances, which can result in more serious declines in well-being and mental health (Fejfar & Hoylow, 2000). There is considerable empirical support for the notion that discrepancies between current and ideal states induce dejection-related emotions due to falling short of one's goals. Discrepancies between career aspirations and attained careers are associated with job dissatisfaction and negative affect in employees (Carr, 1997; Hesketh & McLachlan, 1991); discrepancies between career aspirations and expectations are related to more career indecision, less career-related confidence, and reduced career maturity in high school students (Patton & Creed, 2007); and discrepancies between one's ideal and actual academic achievement is related to poorer self-esteem and more depressive symptoms in adolescents (Ferguson, Hafen, & Lauresen, 2010). An example from outside of the career domain is that body image discrepancies predict body dissatisfaction and bulimic eating (Sanderson, Wallier, Stockdale, & Yopyk, 2008). Although the consequences of perceived discrepancies are well established in the general psychological literature (e.g., Lord et al., 2010), and intervention strategies have been outlined (e.g., Hardin & Leong, 2005), little research has examined this relationship directly in the career domain. Thus, our first hypothesis is that perceived career goal-progress discrepancy will be associated with poorer career-related well-being. We operationalised career-related well-being as career distress, which represents apprehension about managing

personally important tasks and goals that are essential for career development and progress (Code & Bernes, 2006).

Appraising a goal-progress discrepancy leads to uncomfortable or distressing feelings, but the level of distress experienced is dependent on the individual's situation (e.g., the level of financial and emotional support) and their own self-regulatory strategies (Carver & Scheier, 1982; Lord et al., 2010). Specific to our study, individuals who appraise a career goal-progress discrepancy will have varying degrees of distress depending on the level of positive career-related activities they are engaging in at the time. Consistent with this proposition, Creed and Hughes (2013) found that career compromise (operationalised as the discrepancy between desired and expected job characteristics) was related positively to career distress, but that career-related strategies (e.g., seeking career guidance) weakened (i.e., moderated) the relationship. Seeking career guidance, thus, is an example of a self-regulatory, or protective, strategy that acted to weaken the relationship between compromise and distress. Self-regulatory strategies have been found to reduce distress in other domains, such as reducing the negative affect resulting from athletic goal-progress discrepancies (Gaudreau, Blondin, & Lapierre, 2002) and in religious self-discrepancies (Lilliston & Klein, 1991). Self-regulation strategies are considered crucial to personal adjustment and achievement (Lord et al., 2010; Porath & Bateman, 2006). We test two important, career-specific, self-regulatory strategies: career exploration and planning, both of which are considered crucial actions needed to progress career gaols (Rogers, Creed, & Glendon, 2008). Career exploration refers to the gathering of relevant information related to the self (e.g., exploring values and interests) and the world-of-work (e.g., exploring educational and employment opportunities) that facilitates career decision-making (Zikic & Klehe, 2006). Career planning involves integrating and organising collected information and manipulating it to determine a course of action and timelines (Zikic & Klehe, 2006). In the career context, both career exploration and planning are related positively to well-being in high school students (Patton, Bartrum, & Creed, 2004),

college students (Creed et al., 2009) and adults (Barnett & Bradley, 2007). From this, our second hypothesis is that career exploration and planning will buffer (i.e., moderate) the relationship between perceived career goal-progress discrepancy and career distress.

Antecedents to Perceived Career Goal-Progress Discrepancy

The setting of a goal generates goal-related plans and actions aimed at achieving the goal, and these plans and actions stimulate the individual to seek feedback on whether the goal is suitable, whether the plans and actions are appropriate, whether the affect and cognitions related to the goal are fitting, whether satisfactory progress is being made (i.e., is there a goal-progress discrepancy), and how might any discrepancies be resolved (Hattie & Timperley, 2007; Shute, 2008). Feedback can be defined as any information provided by an agent (e.g., parent, peer, teacher, media), which informs the individual about their current state of learning and performance relative to what is required (i.e., relative to self- and/or other-set goals; Hattie & Timperley, 2007; Strijbos, Narciss, & Dünnebier, 2010). Individuals make direct inquiries of others to gain information about their goal selection and performance, and also engage in surreptitious observation of others' responses to their actions in order to learn how well they are progressing (Ashford, 1986). Feedback, thus, plays a critical role in human self-regulation: it is implicated in most aspects of behaviour (e.g., motivation, emotion, cognition) and is a necessary part of goal management and achievement (e.g., should the goal be modified; should effort be increased? Lord et al., 2010). In goal-setting and self-regulation theories, feedback stimulates feedback and feed-forward loops that allow the individual to adjust their behaviour and direction (e.g., Bandura, 1991; Carver & Scheier, 1990).

Specific to the career area, young adults actively explore their future or possible selves and evaluate progress regarding their career aspirations and dreams. This exploration is characterised by conversations with others, incorporating information from the world around them, and evaluating their occupational and life experiences (Kerpelman & Schvaneveldt, 1999; Young et al., 2006). Identity development generally, and career development

specifically, are interpersonal processes (Anderson & Mounts, 2012), which involve conscious and unconscious efforts to determine the correctness and adequacy of behaviour for attaining valued career states (Ashford, 1986). Kerpelman, Pittman, and Lamke (1997) proposed a model for feedback seeking in the career area. When setting and evaluating goals and evaluating goal progress, individuals seek out and interpret the opinions of others to inform their decisions, and when feedback about goal adequacy and/or progress is inconsistent with their set direction and performance (e.g., “Your grades are not good enough to get you into graduate school”), a goal-progress discrepancy is created. Employees, for example, value feedback from peers and supervisors, as this provides them with information that helps them compare their actual performance against what is required, and informs them about adjustments to be made (Morrison, 1993; Renn & Fedor, 2001). Career goal-progress discrepancies have also been induced artificially in laboratory studies by giving feedback challenging the career aspirations of participants (Kerpelman & Pitman, 2001). From the above, our third hypothesis is that higher levels of negative feedback on goal progress will be associated with higher levels of goal-progress discrepancy. As interactions with parents, peers, and important other others (e.g., extended family and teachers) are key influences in the career development of the individual (Hargrove, Creagh, & Burgess, 2002; Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002), we assessed feedback from this diverse group of “significant others”.

Critical to the effect of this feedback on the individual (i.e., the strength of the goal-progress discrepancy) is the degree to which the individual seeks feedback and is receptive to the feedback they receive (Ashford 1986). This is dependent on their need for feedback, the skills individuals have to seek feedback from others, their capacity to interpret the feedback, and their ability to apply it (Ashford, Blatt, & Vande Walle, 2003), and might also be influenced by such things as need for approval and how much they respect and trust the person giving the feedback (Creamer & Laughlin, 2005). Seeking feedback proactively, whether it is by overt or

covert means, is likely to reduce uncertainty around what one is doing, and how well one is doing it (Callister, Kramer, & Turban, 1999). Actively seeking feedback is thus likely to exacerbate goal-progress discrepancies when the feedback received is negative. From this, our fourth and final hypothesis is that actively seeking feedback will moderate the relationship between feedback from significant others and career goal-progress discrepancy (i.e., actively seeking feedback will strengthen the relationship).

Method

Participants

Participants were 430 young adults who responded to an online questionnaire (10 were discarded due to missing data and/or biased response patterns). The final sample of 420 comprised 307 young women (73.1%) and 113 young men (mean age = 20.3 years, *SD* = 2.7, range 18-29). Most identified as Australian (73.3%), and other backgrounds included Chinese, Indian, New Zealander, SE Asian, and Western European (< 5%), South African, British, Mediterranean, and Middle Eastern (< 2%). Participants reported their typical Year 12 grade: 20.7% indicated very high, 56.0% indicated high, 21.4% indicated average, and 1.9% indicated below average (5-point response format of 1 = *low achievement* to 5 = *very high achievement*). As a proxy for SES, we also asked about their financial situation: 36.2% indicated that this was comfortable, 41.7% above average, 16.7% below average, and 5.5% as difficult (5-point response format of 1 = *very difficult on current income* to 5 = *comfortable on current income*).

Materials

Career-related distress. We used the 13-item Subjective Career Distress Subscale from the Coping with Career Indecision Scale (Larson, Toulouse, Ngumba, Fitzpatrick, & Heppner, 1994), which assesses distress relating to career decision-making and avoidance of career thoughts and goal setting. Sample items are “I often feel down or depressed about selecting a career” and “I tend to smooth over any career problem I have and pretend it doesn’t exist”. Responses are indicated on a Likert-type scale (1 = *strongly disagree* to 6 = *strongly agree*),

with higher scores representing more distress (potential score range = 13 to 78). Larson et al. (1994) reported an internal reliability coefficient of .90, and supported validity by demonstrating correlations with standard well-being scales in a sample of university students. Alpha for the current sample was .93.

Career goal-progress discrepancy. This was assessed using the 12-item Career Related Discrepancies Scale (Creed & Hood, 2014), which assesses four underlying areas of career goal-progress discrepancy: achievement, ability, effort, and standard-related discrepancies. Sample items include "My performance so far will not get me the career I want" and "I thought I had the ability to get the job that I want, but now I am not so sure". Participants respond using a Likert-type format (1 = *strongly disagree* to 6 = *strongly agree*), with higher scores indicating greater discrepancy (potential range = 12 to 72). Support for validity was demonstrated by using factor analysis and finding correlations in the expected direction with other career-related variables (e.g., related negatively with career goal commitment and positively with career-related distress) in a university student sample, and the scale has high internal reliability (α = .93; Creed & Hood, 2014). Alpha in the present study was .96.

Career planning. We used the 8-item Career Thinking and Planning Subscale of the Career Salience Scale (Greenhaus, 1971) to assess the level of career-relevant thoughts and planning. Sample items were "I think deciding on a career is just about the most important decision I will make" and "I enjoy thinking about and making plans about my future career". We used a Likert-type response scale (1 = *strongly disagree* to 6 = *strongly agree*), where higher scores represented more career planning (possible range = 8 to 48). Internal reliability coefficients have been reported previously as .74 and .72 in university (Creed, Fallon, & Hood, 2009) and adult samples (Zikic & Klehe, 2006), and validity has been supported by finding positive associations with measures of job searching, career exploration (Zikic & Klehe, 2006), self-exploration, and self-regulation (Creed, Fallon, & Hood, 2009). Alpha for the sample used in this study was .78.

Career exploration. We used the eleven self- and environmental-exploration questions from the Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983): five items tap self-exploration (e.g., "I have been focusing my thoughts on myself as a person in relation to my career") and six ask about external activities (e.g., "I have obtained information on the job opportunities in my career area"). Responses were made on Likert-type scale (1 = *strongly disagree* to 6 = *strongly agree*), where higher scores equated to higher levels of exploration (possible range = 11 to 66). High internal reliability has been found for the eleven items with adolescents (α = .90), and validity for the construct has been supported by finding positive associations with career exploration, career choice readiness, and career confidence (Hirschi, 2009). Alpha in the current study was .87.

Feedback on career progress from significant others. As there was no existing scale to assess this career-specific construct, we generated nine items designed to assess career-related feedback from friends, family, and significant others. Item content was based on reference to the career literature, focus groups conducted with young adults, and ratings from experts in career psychology and scale development. We were guided by the definition of feedback as any action "taken by (an) external agent(s) to provide information regarding some aspect(s) of one's performance" (Kluger & Denisi, 1996, p. 235), and considered important external agents to include the family, friends, and other significant others (e.g., school teachers; Mortimer et al., 2002). Sample items were: "My family tells me that the grades I am receiving in my studies will not get me the career I want" and "My friends think I should be more focused on my career". Responses were made on a Likert-type response format (1 = *strongly disagree* to 6 = *strongly agree*), with higher scores representing higher levels of negative feedback about career progress (possible range = 9 to 54). A principal axis factor analysis indicated one clear factor, which accounted for 58% of the variance after one poor item was removed. Factor loadings ranged from .67 to .77, and internal reliability was .90. In support of construct validity, the final 8-item scale was associated with other variables used in the study in the

expected direction (e.g., positively associated with feedback seeking, goal-progress discrepancy, and career distress; see Table 1 for correlations and Appendix for the eight items).

Feedback seeking. This was assessed using the 8-item Feedback Seeking Scale (Callister et al., 1999), which we modified slightly to reflect seeking feedback on career progress. For example, the item "I ask my coworkers if I am doing a good job" was changed to "I ask family members if they think I am heading in the right direction with my life", and "Because of the reactions I receive from my coworkers, I can tell whether I am doing the things that should be doing" was changed to "Because of the reactions I get from others, I can tell whether I am doing the things that I should be doing". Responses were indicated on a Likert-like response format (1 = *strongly disagree* to 6 = *strongly agree*), with higher scores reflecting higher levels of feedback seeking (possible range = 8 to 48). A principal factor analysis yielded one factor, which accounted for 43.5% of variance, with factor loadings ranging from .45 to .72. Callister et al. (1999) reported an internal reliability of .77 for the original scale with an employed sample, and supported validity by finding correlations between the scale and other feedback-seeking related measures. Alpha for the current study was .81.

Procedure

The study, which was approved by the authors' university ethics' committee, used an online questionnaire that was circulated widely to the general university student body across five campuses of one Australian university. Participants were eligible to enter a draw to win a $50 shopping voucher for completing the questionnaire.

Results

Mediation. We used latent variable analysis (AMOS 21) to assess if career goal-progress discrepancy mediated between feedback from significant others and career distress. All scale items were parcelled to represent the latent variables (Landis, Beal, & Tesluck, 2000). To do this, we conducted separate exploratory factor analyses for each scale, rank ordered the items according to their factor loadings, and then distributed them to individual parcels using an

item-to-construct balance approach (Hau & Marsh, 2004). The three latent variables (i.e., career goal-progress discrepancy, feedback from significant others, and career distress) were each represented by three parcels. First, we assessed a measurement model to determine if all latent variables could be represented by their parcels and were independent of one another. The, we tested two structural models to assess if discrepancy mediated between feedback and distress. To do this, we tested a direct-effects model, where a direct pathway from feedback to distress was included, and then tested an indirect-effects model, where both direct (feedback to distress) and indirect effects (from feedback to discrepancy and from discrepancy to distress) were included. Mediation occurs when the predictor (feedback) is associated with both the mediator (discrepancy) and the outcome variable (distress), and the strength of the relationship between the predictor and outcome is reduced significantly (partial mediation) or reduced to zero (full mediation) when the mediator is included in the model (Baron & Kenny, 1986). We used the AMOS bootstrapping procedure (1000 samples) to generate standard errors and 95% bias-corrected confidence intervals (CIs). Mediation is present when the CIs of the indirect effect do not include zero (Preacher & Hayes, 2008). To assess model fit with a sample > 250 and < 12 observed variables, we used chi-square (χ^2; significant *p* value expected), the normed chi-square (χ^2/df; < 3.0), Comparative Fit Index (CFI .95 or better), the Root Mean-Square Error of Approximation (RMSEA < .07; Hair, Black, Babin, & Anderson, 2010).

The measurement model produced good fit statistics, $\chi^2(24) = 54.97$, $p < .001$, $\chi^2/df = 2.29$, CFI = .99, RMSEA = .06, with standardised loadings on the latent variable all significant ($p < .001$), and ranging from .78 to .97, and correlations among the latent variables ranging from .46 to .63 (all $p < .001$). Second, there were also good fit statistics for the first structural model, which tested the direct effect of feedback on distress, $\chi^2(24) = 54.97$, $p < .001$, $\chi^2/df = 2.29$, CFI = .99, RMSEA = .06. No control variables were included in this analysis, as the associations between the demographic variables and the two outcome variables (discrepancy and distress) were trivial (absolute range .01 to .16; see Table 1). In this model, the pathways from feedback

to distress ($\beta = .46$, $p < .001$) and feedback to discrepancy ($\beta = .55$, $p < .001$) were both significant, with feedback accounting for 21.1% of the variance in career distress and 30.0% in discrepancy. Third, when we tested the direct and indirect effects together, the pathway from discrepancy to distress was significant ($\beta = .54$, $p < .001$), and the CIs for the indirect effect from feedback to distress via discrepancy did not contain zero ($CI_{95} = .35$ to .60). As the direct effect of feedback on distress remained significant ($\beta = .16$, $p = .01$), mediation was partial. Feedback accounted for a total of 45.9% of the variance in career distress, with 16.4% resulting from the direct effect, and 29.6% mediated via discrepancy.

Moderation. We used hierarchical regression analyses to test (a) whether level of feedback seeking moderated the relationship between feedback from significant others and career goal-progress discrepancy, and (b) whether career planning and exploration moderated the relationship between career goal-progress discrepancy and career distress. Again, no control variables were included in the analyses. For the first analysis, feedback from significant others was entered at Step 1, feedback seeking was entered at Step 2, and a feedback from significant others x feedback seeking interaction term was entered at Step 3. Feedback from significant others accounted for 26.4% of the variance at Step 1, $F(1, 418) = 149.70$, $p < .001$; feedback seeking was not significant at Step 2, $F(1, 417) = .55$, $p = .46$; and the interaction term was significant at Step 3, $F(1, 416) = 4.66$, $p = .03$. At this final Step, 27.3% of the variance of career goal-progress discrepancy was explained. To help interpret the interaction effect, we constructed a graph based on $\pm 1SD$ for levels of the moderator. There is no difference in goal-progress discrepancy at lower levels of feedback from significant others when seeking feedback is low, but as feedback from significant others increases, goal-progress discrepancy increases for those in both the low and high feedback seeking groups, but increases disproportionately faster for those in the high feedback seeking group. See Figure 2.

For the second regression analysis, goal-progress discrepancy was entered at Step 1, career exploration at Step 2, and the interaction term at Step 3. Goal-progress discrepancy accounted

for 36.6% of the variance at Step 1, $F(1, 418) = 241.53$, $p < .001$; career exploration was not significant at Step 2, $F(1, 417) = 1.23$, $p = .27$; and the interaction term was significant at Step 3, $F(1, 416) = 4.32$, $p = .04$. A total of 37.5% of variance in career distress was explained. For the interaction, there was no difference in distress at higher levels of goal-progress discrepancy, but as discrepancy reduced, distress reduced disproportionately more for those in the high exploration group. For the last regression analysis assessing career planning as the moderator between goal-progress discrepancy and career distress, discrepancy accounted for 36.6% of the variance at Step 1, $F(1, 418) = 241.53$, $p < .001$; career exploration was not significant at Step 2, $F(1, 417) = 2.59$, $p = .11$; and the interaction term was significant at Step 3, $F(1, 416) = 3.89$, $p = .04$. A total of 36.7% of variance was explained. For the interaction, there are no differences in distress levels at higher levels of discrepancy, but as discrepancy reduces, distress reduces disproportionately more for those in the high planning. See Figure 3.

Discussion

We tested the correlates of perceived career goal-progress discrepancy in a model that proposed that higher levels of negative feedback about career progress from significant others would be related to more career goal-progress discrepancy, which, in turn, would be related to higher levels of career-related distress. Additionally, the model proposed that goal-progress discrepancy mediated between feedback and distress, active feedback seeking strengthened the relationship between feedback and goal-progress discrepancy, and the strategies of career exploration and planning weakened the relationship between goal-progress discrepancy and distress. The model was informed, first, by general goal-setting and self-regulatory theories (e.g., Bandura, 1991; Carver & Scheier, 1982; Lord et al., 2010) and, second, by applications of these general theories to the career domain (e.g., Anderson & Mounts, 2012; Kerpelman et al., 1997). These theories propose that people set goals, evaluate their progress, and then implement strategies to achieve and/or adjust them, that goal progress is informed by feedback

from the environment, especially social feedback, and that failure to progress goal achievement results in disappointment.

Consistent with these models, in the latent variable analyses we found that higher levels of negative feedback from significant others was associated with more career goal-progress discrepancy and higher career distress, more career goal-progress discrepancy was associated with higher career distress, and career goal-progress discrepancies partially mediated between feedback and distress. A significant and meaningful amount of variance was accounted for in career distress (46%). This suggests that young adults are attuned to social feedback regarding their career progress and direction, and that when the feedback is negative (i.e., they are not doing well enough), this alerts them to disparities in their goal progress, and that both the feedback and the disparities lead to feelings of dissatisfaction.

In our study, we assessed social feedback only, and used a measure tapping global perceptions from significant others. Feedback models (e.g., Hattie & Timperley, 2007; Shute, 2008) suggest multiple aspects to feedback, including the source of the message (e.g., social, experiential, or media feedback), characteristics of the sender (e.g., the status of sender, such as feedback from parent or expert), message content (e.g., the completeness of the feedback, such as whether the message contains information on how to manage any discrepancy), and characteristics of the receiver (e.g., personality traits, such as social sensitivity). Teasing out what type of feedback, and under what conditions, career feedback will be most influential and useful will add to our understanding here. We demonstrated the effects of one moderating variable on feedback, the level of active pursuit of feedback, and showed that this can act as an intervening variable between broadly defined social feedback and level of goal-progress discrepancy. Actively pursuing feedback was associated with higher levels of feedback and, in turn, higher levels of goal-progress discrepancy. In other words, more active feedback seeking strengthened the relationship between the negative feedback received and discrepancies.

Additionally, we only assessed levels of negative feedback (i.e., higher scores on our scale represented perceptions of more negative feedback and lower scores represented lower levels of negative feedback), which is reflected in this sample question, "My family tells me that I am not working hard enough to reach my career goals". Scores on our scale were normally distributed, suggesting that negative feedback regarding career progress is a common experience; however, assessing the effects of positive feedback could also be important. Positive feedback, for example, might stimulate more active engagement in career-related activities, although it has also been shown to be related to more complacency in relation to goal achievement (Moore & Kuol, 2005). We know little about the role that feedback plays in career development, from either the sender's or receiver's perspective, or regarding message content or timing of feedback. Goal setting/self-regulatory models suggest that individuals seek feedback for different purposes (e.g., to inform on goal progress and to inform on goal desirability), and future studies could address such issues.

In our study, higher levels of career goal-progress discrepancy were associated with more career distress, which is consistent with theoretical expectations (e.g., Carver & Scheier, 1982), and consistent with what has been demonstrated experimentally (e.g., Anderson & Mounts, 2012). Not having confidence that you are achieving the goals you set or are meeting the aspirations you have, both generally and in the career domain, and getting feedback from those around you that this is the case, leads to negative feelings and being less satisfied. What will be useful here is determining the types of strategies and actions that will ameliorate or lessen this negative affect when goal progress is questioned. We demonstrated the benefits of engaging in career exploration and planning activities: higher levels of both exploration and planning were associated with less career distress, although this benefit occurred at lower levels of discrepancy, and the effects, while significant, were not strong. The challenge for researchers here will be to identify specific career-domain, as well as general, strategies and plans that will be beneficial when perceptions of discrepancies are high.

There are practical implications from our study. First, when working with young adults, counsellors should try to understand their client's aspirations, determine what important others are telling the young person about their goals and goal progress, and help them clarify their own thoughts and feeling regarding any goal-discrepancy they perceive and the messages they are getting from others about it. Second, counsellors might help their clients to process and manage the feedback they are receiving, and help them with strategies that will assist them to manage any negative feelings and disappointments as a result of it. Finally, counsellors can help their clients with strategies and actions that will be useful to bridge the gap between their progress and where they want to be, or help them formulate new goals regarding their future. The use of goal setting in career interventions is widespread and considered important (Brown et al., 2003), and incorporating aspects around feedback on goals, perceptions of goal progress, and responses to goal frustration could provide a productive focus.

Our study tested a plausible, causal model, which accounted for almost half of the variance in domain-specific, career distress. However, as our study was cross-sectional, the direction of causality cannot be confirmed. For example, it is conceivable, that negative feedback leads to distress, which in turn results in more negative perceptions of career progress. This pathway is counter to the theoretical models, but longitudinal studies are required to tease out the directions of influence. While we used a large sample to test the hypotheses, the sample had high levels of education, was made up disproportionately of young women, and was drawn from one localised area. Future studies can increase confidence regarding the generalizability of results by testing relationships on different samples. Despite these limitations, the study has contributed to the career development literature by highlighting the importance of feedback on perceptions of goal progress, demonstrating the strong relationship between feedback, goal appraisal and career distress, and identifying strategies that might ameliorate the relation between discrepancies and distress.

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Table 1

Summary Statistics and Bivariate Correlation (N = 420)

Variables	*M*	*SD*	2	3	4	5	6	7	8	9	10
1. Career goal-progress discrepancy	31.71	13.10	.51***	.10*	.61***	-.14*	-.10*	-.09	-.16**	-.06	-.01
2. Feedback from significant others	17.31	7.40	1	.14**	.44***	-.13*	-.01	-.10*	-.19**	-.08	.14**
3. Active feedback seeking	29.01	6.63		1	.18**	.22***	.32***	-.09	.05	.07	-.07
4. Career distress	38.32	13.24			1	-.14**	-.10*	-.08	-.06	-.15**	.03
5. Career planning	34.79	6.13				1	.48***	-.01	.07	-.04	-.20***
6. Career exploration	45.80	8.65					1	.11*	.06	-.01	-.05
7. Age	20.32	2.66						1	-.25***	-.16**	.05
8. Education	3.95	.71							1	.08	-.14**
9. Financial situation	3.09	.86								1	-.04
10. Gender	-	-									1

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2

Hierarchical Regression Analysis Predicting Career Goal-Progress Discrepancy (N = 420)

Variables	*B*	*SE(B)*	β	sr^2
Step 1				
Feedback from significant others	.91	.07	.51***	.26
Step 2				
Feedback from significant others	.90	.08	.51***	.25
Active feedback seeking	.06	.08	.03	.01
Step 3				
Feedback from significant others (SO)	.28	.30	.16	.01
Active feedback seeking (FS)	-.28	.18	-.14	.01
SO x FS	.02	.01	.42*	.01

R^2 at Step 1 = .26 (R^2_{Adj} = .26), R^2 at Step 2 = .27 (R^2_{Adj} = .26), R^2 at Step 3 = .27 (R^2_{Adj} = .27); * $p < .05$; *** $p < .001$

Table 3

Hierarchical Regression Analysis Predicting Career Distress (N = 420)

Variables	*B*	*SE(B)*	β	sr^2
Exploration as Moderator				
Step 1				
Career goal-progress discrepancy	.61	.04	.61***	.37
Step 2				
Career goal-progress discrepancy	.61	.04	.60***	.36
Career exploration	-.07	.06	-.04	.01
Step 3				
Career goal-progress discrepancy (GD)	.17	.22	.17	.01
Career exploration (CE)	-.35	.15	-.23	.01
GD x CE	.01	.01	.46*	.01
Planning as Moderator				
Step 1				
Career goal-progress discrepancy	.61	.04	.61***	.37
Step 2				
Career goal-progress discrepancy	.60	.04	.60***	.36
Career planning	-.14	.09	-.06	.01
Step 3				
Career goal-progress discrepancy (GD)	.15	.23	.15	.01
Career planning (CP)	-.54	.22	-.25*	.01
GD x CP	.01	.01	.47*	.01

For exploration, R^2 at Step 1 = .37 (R^2_{Adj} = .37), R^2 at Step 2 = .37 (R^2_{Adj} = .37), R^2 at Step 3 = .38 (R^2_{Adj} = .37); for planning, R^2 at Step 1 = .37 (R^2_{Adj} = .37), R^2 at Step 2 = .37 (R^2_{Adj} = .37), R^2 at Step 3 = .38 (R^2_{Adj} = .37); * $p < .05$; *** $p < .001$

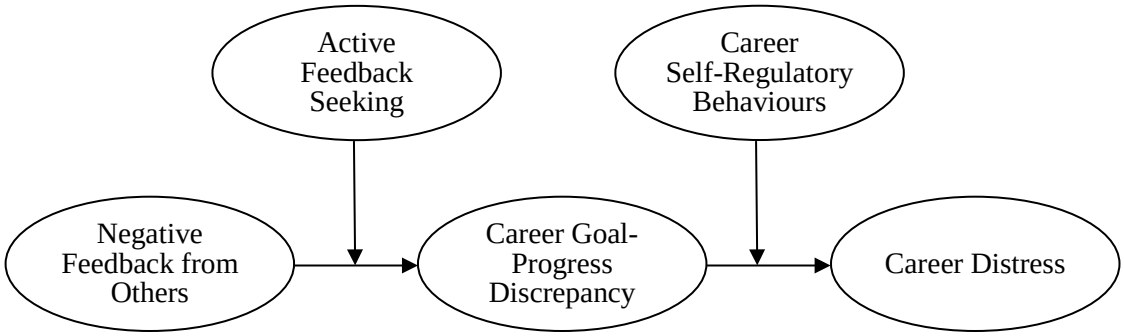

Figure 1. (a) Feedback from significant others predicts career goal-progress discrepancy, which in turn predicts career distress; (b) active feedback seeking strengthens relationship between feedback from significant others and career goal-progress discrepancy, and career self-regulatory behaviours (career exploration and planning) weakens relationship between career goal-progress discrepancy and career distress.

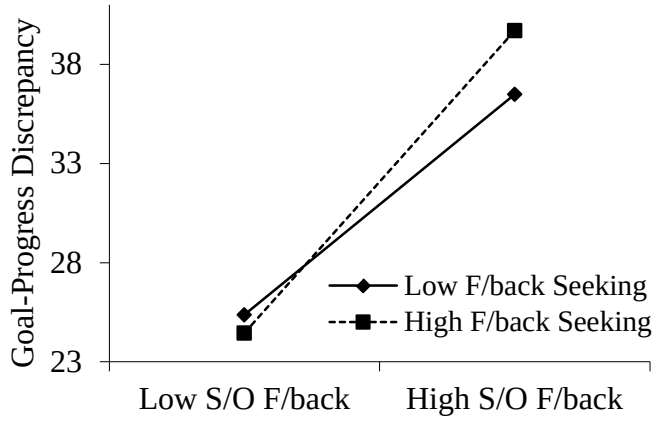

Figure 2. Feedback seeking moderates between feedback from significant others and goal-progress discrepancy.

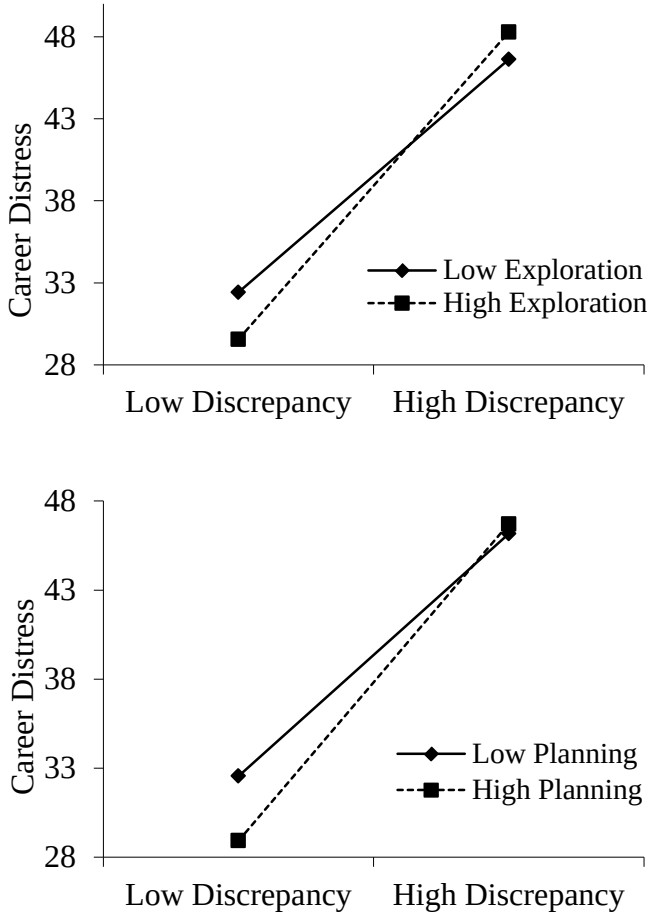

Figure 3. Career exploration (top) and career planning (bottom) moderate between goal-progress discrepancy and career distress.

Appendix

An 8-item Scale to Assess "Feedback on Career Progress from Significant Others"

1. My family tells me that I am not working hard enough to reach my career goals.
2. My friends think I should be more focused on my career
3. I have had other people say to me that the progress I am making on my career is too slow.
4. My family tells me that the grades I am receiving in my studies will not get me the career I want.
5. I know from what my family is saying that I need to think more about my career.
6. It is clear from what my family is saying that they don't think I am capable of reaching my career goals.
7. My friends doubt that I can achieve my ideal career.
8. My friends tell me that my ideal career is out of my reach.