

Goal Orientation and Career Identity

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Abstract

We surveyed 281 young adults (M_{age} 26 years) and tested a model that considered goal orientation (mastery-approach, performance-approach, and performance avoid) as an antecedent to career identity (career exploration and commitment), and where career identity predicted career behaviours (career-related strategies) and affect (career distress). Consistent with dynamic, goal-directed models of career development, we also assessed career identity as a mediator. Mastery- and performance-approach were associated with more career exploration, which, in turn, was associated with more use of career-related strategies. Performance-avoid was associated with more career commitment, which was then related to more distress. The study demonstrated that goal orientation is a potentially important antecedent to career identity. We found different correlates for different aspects of career identity, and demonstrated that higher levels of some aspects of career identity were not associated with positive outcomes.

Keywords: career identity; career exploration; career commitment; goal orientation; mastery-approach; performance-approach; performance-avoid; career strategies; career distress

Goal Orientation and Career Identity

Career identity is considered both a “critical developmental task” and an “indicator of progress” of career development (Skorikov & Vondracek, 2007, p. 143). In industrialised countries, acquiring a career identity is viewed as one of the most important tasks for young people (Porfeli, Lee, Vondracek, & Weigold, 2011). Those with a well-developed identity are aware of their life and vocational interests, have a realistic appraisal of their capabilities, have insight into their personality, and are engaged in setting, monitoring, and making progress towards important, career-related goals; whereas, those with a poorer developed identity struggle to understand who they are and where they are heading (Holland, Daiger, & Power, 1980). Career identity, thus, reflects personal agency in the career domain (Hirschi, 2012b), and is seen as critical for success in 21st Century labour-markets (LaPointe, 2010). However, despite its importance, there has been little theoretical development of the construct, and few studies have explored factors that might foster, or impede, its development (Skorikov & Vondracek, 2007, 2011). We contribute to the career identity literature by testing a model in which goal orientation (i.e., the approach individuals rely on in achievement-related situations; Dweck & Leggett, 1988) is treated as an antecedent to career identity (career exploration and commitment; Marcia, 1980), which, in turn, is viewed as an antecedent to career behaviours (strategies) and affect (career distress). See Figure 1.

Career identity

Career identity reflects having “a clear and stable picture of one’s goals, interests, and talents” (Holland, Gottfredson, & Power, 1980, p. 1191), and is operationalised mainly as career exploration and commitment (Skorakov & Vondracek, 2007). General identity development is associated with better adjustment (e.g., reflected in better mental health, engaging in fewer risky behaviours, feeling more in control, and being better integrated

socially; Kroger & Marcia, 2011; Meeus, 2011; Skorikov & Vondracek, 2011). Making progress with career identity is also related to better well-being and more positive affect (Skorikov & Vondracek, 2007, 2011), which reflects comfort and ease when making career-related decisions, as the individual has an age-appropriate focus on career development and is engaging in self and career-related exploration (Holland, 1996; Skorikov & Vondracek, 2011; Super, 1980). Consistent with this, career identity is associated with career decision-making competency (Gushue, Scanlan, Pantzer, & Clarke, 2006), career decision stability (Kidd & Green, 2006), career calling (Hirschi & Herrmann, 2012), and more positive school-to-work transitions (Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002). Thus, we expected career identity (both exploration and commitment) to be related to lower levels of negative affect, which we operationalise as context-specific career distress.

As career identity is the primary mechanism for agency in the career domain, it underpins the integration of self and world-of-work knowledge, facilitates career decision-making and goal setting, and drives self-regulatory actions to progress career-related goal achievement (Hirschi, 2012b). Critical actions necessary to meet career goals are the career-enhancing strategies used by individuals. These reflects an active approach towards career attainment and success, and is facilitated, for example, by developing expertise, expanding personal networks, and increasing interpersonal attractiveness (Nabi, 2003). Consistent with this, career-enhancing strategies are related positively to career decision-making, career exploration, career self-concept (Weng & McElroy, 2010), career goal setting (Anakwe, Hall, & Schor, 2000), self-perceptions of employability (Creed & Hughes, 2012), and career calling (Praskova, Hood, & Creed, 2014), and associated with less career compromise and distress (Creed & Hughes, 2012). From this, we expected career identity (career exploration and commitment) to be associated with greater use of career-enhancing strategies.

The development of career identity “is shaped by the person’s activities and experiences and a variety of individual (e.g., personality and gender) and contextual (e.g., family, peer group, social and economic conditions) factors, as well as their interaction” (Skorikov & Vondracek, 2011, p. 701). Consistent with this, several person-based constructs have been shown to be related to career identity, such as core self-evaluations (Koumoundourou, Kounenou, & Siavara, 2012), self-esteem, proactivity (Santos, 2003), and personality variables like conscientiousness (Hirschi, 2012b). There have been calls for researchers to examine the effects of individual differences on the development of career identity to assess why some individuals develop a clear and strong career identity and others do not (Nauta & Kahn, 2007; Skorikov & Vondracek, 2007, 2011). For career identity, which encapsulates the framework within which individuals explore career options and set, progress, and achieve career-related goals, the individual’s goal orientation (Dweck & Leggert, 1988; Elliot, 2005) is an important, but unexamined person variable that potentially affects how career goals are conceptualised, developed, and tackled (DeShon & Gillespie, 2005; Payne, Youngcourt, & Beaubien, 2007).

Goal orientation.

Individuals interpret and behave differently in achievement-related situations, and have different achievement and well-being outcomes depending on their tendency to engage in, or disengage from, goal-related actions; that is, depending on their goal orientation (Elliot, 2005; Pintrich, 2000). Two main types of goal orientation have been identified: mastery-approach and performance-approach. Mastery-approach individuals hold the view that competency and ability can be developed; thus, they focus on personal development and skills acquisition. They tend to set meaningful and challenging tasks, persist with them, and make the contingency connection between effort and outcome. As a result, they typically generate positive outcomes for themselves (Cellar et al., 2011; Payne et al., 2007). In the careers area, mastery-approach individuals have higher career aspirations, more of a career focus, expect more positive career

outcomes, engage in more self and career exploration, demonstrate higher levels of career self-efficacy, and report less career indecision (Creed, Buys, Tilbury, & Crawford, 2013; Creed, Fallon, & Hood, 2009; Garcia, Restubog, Toledano, Tolentino, & Rafferty, 2012).

Performance-approach orientation is considered to have two components: performance-approach and performance-avoid (VandeWalle, 1997). Both orientations are underpinned by the view that ability is a fixed characteristic, which cannot be developed. Performance-approach individuals seek to gain positive feedback from others to demonstrate their competency; thus, they will set high goals, especially in situations where there is a good chance of success, but their persistence is low, as goals set to impress are less intrinsically rewarding (Davis, Carson, Ammeter, & Treadway, 2005). As might be expected, performance-approach is associated with positive achievement, although the relationship tends to be weaker and more mixed than for mastery-approach (Cellar et al., 2011; Payne et al., 2007; Yeo, Sorbello, Koy, & Smillie, 2008). In the career area, performance-approach is associated with higher career optimism, efficacy, and aspirations (Creed et al., 2013). Mixed results have been found for career exploration and planning: Creed, Fallon et al. (2009) found no associations in university students; whereas Creed et al. (2013) found positive associations in high school students.

Those with a performance-avoid orientation engage their motivation and behaviours to avoid negative outcomes, as these might leave them open to being perceived as incompetent (Jackson, Hobman, Jimmieson, & Martin, 2009). They are not confident about success, feel anxious about others' scrutiny, and protect themselves by setting low goals and engaging in withdrawal and other self-handicapping strategies (Urduan & Midgley, 2001). Outcomes associated with performance-avoid for both affect and achievement are typically poorer (Cellar et al., 2011; Payne et al., 2007), with avoiders expressing more career concerns and having lower levels of career decision-making efficacy, self-regulation, optimism, and career aspirations (Creed, Fallon et al., 2009; Creed et al., 2013).

From a theoretical perspective, mastery-approach should be associated with more positive identity development, which, for young adults, would be reflected in more exploration, as being open and curious about the world is the hallmark of mastery orientation and a central process in identity development. It should also be associated with lower levels of commitment, or be unrelated to commitment, as commitment is likely to reflect foreclosure (Marcia, 1980), which is undesirable in Westerners of this age group as it reflects lack of depth in exploration (McLean & Pratt, 2006). Performance-approach, where there is a focus on external referencing (Cellar et al., 2011), might be expected to be associated with less exploration, as this is largely intrinsically motivated (Blustein, 1988), and to be related to less commitment, as this potentially restricts individuals from adjusting their goals to best advantage them demonstrating prowess. Last, performance-avoid, with its focus on normative evaluation and fear of failure, should be associated negatively with both exploration and commitment.

Not all of these relationships have been tested in the career domain. Positive associations have been found for mastery- and performance-approach and self- and career-exploration in children and young adults, although the relationships have not been consistent (Creed, Fallon et al., 2009; Creed et al., 2013; Yousefi, Abedi, Baghban, Eatemadi, & Abedi, 2011). Also, Creed, Fallon et al. (2009), who found both mastery- and performance-approach to be associated with exploration, found a stronger correlation for mastery (.60 vs. .29; both $p < .001$). Performance-avoid has been found to be both unrelated (Creed et al., 2013; Yousefi et al., 2011) and negatively related (Creed, Fallon et al., 2009) to career exploration.

Few studies have tested the specific relationships with career commitment. Mastery-approach was found to be related positively to organizational commitment, while performance-approach was unrelated, and the relationship with performance-avoid was negative (Maurer & Lippstreu, 2008). In other domains, mastery- and performance-approach are associated with academic commitment in children, while performance-avoid is unrelated (Sideridis, 2005). In

university students, approach orientation is associated with more academic commitment; whereas avoidant orientation is associated with less (King, 2013). Based on the above, we expected mastery- and performance-approach to be related positively to career exploration, and performance-avoid to be related negatively. For career commitment, we expected mastery- and performance-approach to be unrelated and performance-avoid to be related negatively.

Mediation

Goal orientation has consistent relationships with well-being: mastery-approach being associated with better well-being (e.g., lower anxiety, higher self-esteem), and performance-approach and performance-avoid associated with poorer (Cellar et al., 2011; Payne et al., 2007). This is because mastery-approach individuals are personal development oriented; whereas, performance-approach and performance-avoid individuals are, respectively, anxious about normative standards and being identified as incompetent (Dweck & Leggett, 1988). These associations are mirrored in the career area with adult employees (Sideridis, 2005; van der Rijt, Van den Bossche, Van de Wiel, Segers, & Gijsselaers, 2012), women returning to the workforce (Heidemeier & Wiese, 2014), university students (Fasching, Dresel, Dickhäuser, & Nitsche, 2011; Creed, Fallon et al., 2009), and children (Pajares, 2001), although not all studies report all expected relationships.

Goal orientation is also associated with the interpretation of achievement situations, the experiences in the situation, and the strategies employed to achieve desirable performance outcome (Elliot & McGregor, 2001). Strategies, in particular, play a critical role, as these are what drive and sustain the individual's action. Mastery-approach individuals have a tendency to set higher goals, use more effective achievement strategies (e.g., rehearsal, practice), and seek more feedback on their progress. Performance-approach individuals also set high goals, but employ less effective (shallow) strategies, and are less inclined to seek feedback; whereas,

performance-avoid individuals set low goals, do not develop effective achievement strategies, and avoid feedback from others (Cellar et al., 2011; Payne et al., 2007).

Goal orientation is thus associated with career exploration and commitment, and related to career affect and strategies, and career exploration and commitment are also related to affect and strategies. Adaptive, self-directed models of career development suggest dynamic interplays among personal resources, goal setting, effort, achievement, and affect, suggesting that personal resources influence the individual's direction, and this, in turn, influences actions, achievements, and affect, which then feed back to inform goals and goal management process (e.g., Bandura, 1991; Hall & Chandler, 2005; Lent, Brown, & Hackett, 1994). Thus, as well as the direct associations indicated above among goal orientation, career identity, actions, and affect, we expected indirect associations between goal orientation and strategies and affect. Specifically, we expected that goal orientation would influence the development of career identity (exploration and commitment), which would, in turn, lead to the development of career-relevant strategies and be associated with less negative career affect.

Method

Participants

These were 281 undergraduate students from one regional university in SE Queensland, Australia (77% female; $M_{\text{age}} = 26$ years, $SD = 9.5$). When asked about final high school grade, 68 (24%) reported "very high achievement", 130 (46%) "high achievement", 75 (27%) "average", and 8 (3%) "low average" ($M_{\text{ach}} = 2.1$, $SD = .84$). We also asked about financial situation as a proxy for SES status: 34 (12%) indicated they were "much better off than other students", 80 (29%) were "a little better off", 112 (40%) were "about the same", 40 (14%) were "a little worse off", and 15 (5%) considered themselves "much worse off" ($M_{\text{SES}} = 2.7$, $SD = 1.0$). Finally, 190 (68%) indicated they were working as well as studying at university.

Materials

Goal orientation. This was assessed using three, 3-item scales from the Achievement Goals Questionnaire (Elliot & McGregor, 2001). Sample items were “I want to learn as much as possible from this class” (mastery), “It is important for me to do better than other students” (performance-approach), and “I want to avoid doing poorly in this class” (performance-avoid). Responses were made on a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*), with higher total scores indicating stronger orientation. Elliot and McGregor (2001) reported high internal reliability ($\alpha = .85$ to $.97$), and supported validity using factor analysis and finding expected associations with student engagement, deep learning, worry, and goals. Alphas in our study were $.85$ (mastery), $.93$ (performance-approach), and $.77$ (performance-avoid).

Career identity. This was operationalised as exploration (self and career) and commitment, as recommended by Greenhaus and Sklarew (1981). For *career exploration*, we used the 11-item Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983). Sample items were “I have been focussing my thoughts on myself as a person in relation to my career” (self), and “I have obtained information on the job opportunities in my career area” (career). Students used a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*; higher scores = more exploration). In support of validity, Hirschi (2009) found expected associations with career interest and commitment, and reported high reliability ($\alpha = .90$). Our alpha was $.86$.

For *career commitment*, we used the 18-item Vocational Identity Subscale from the My Vocational Situation Inventory (Holland, Daiger, & Power, 1980), which is recommended as a measure of identity commitment (Porfeli et al., 2011). A sample item was “I need reassurance that I have made the right choice of occupation” (6-point response scale: 1 = *strongly disagree* to 6 = *strongly agree*). We reversed all scores so that higher totals reflected more commitment. The scale has sound reliability ($\alpha = .86$), and, in support of validity, was associated positively with decision-making efficacy and negatively with worry and career indecision in a sample of college students (Wang, Jome, Haase, & Bruch, 2006). Alpha with our sample was $.93$.

Career-enhancing strategies. These were measured using the 26-item Career Strategies Inventory (Gould & Penley, 1984). Students were asked to reflect on how they were preparing for their future careers, and respond on a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*) to items such as “Developing skills which may be needed in future positions”. Higher total scores equated with more use of career-enhancing strategies. In support of validity, Praskova et al. (2014) found positive associations with calling and effort in a sample of young adults, and reported an alpha reliability of .91. Alpha in our study was .93.

Career-related affect. We used the context-specific, 13-item Subjective Career Distress Subscale from the Coping with Career Indecision Scale (Larson, Toulouse, Ngumba, Fitzpatrick, & Heppner, 1994) as a measure of negative affect. A sample item was “I think that I should make a career decision as soon as possible, but I can’t and this makes me anxious”. Students responded on a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*; higher total score represented more career distress. Larson et al. (1994) supported validity by finding correlations with standard well-being scales, and reported an internal reliability of $\alpha = .90$ with university students. Alpha for the current sample was .93.

Procedure

The study was approved by the authors’ university ethics committee. Students were recruited via announcements on course websites, campus notice boards, and at lectures, and then directed to an online survey. For participating, they were offered the opportunity to go into a draw to win a \$50 shopping voucher.

Results

We used structural equation modelling (maximum likelihood estimation; AMOS 21) for all analyses. Items for the longer scales (exploration, commitment, strategies, and distress) were parcelled to form a smaller number of observed variables. Advantages from this include fewer, and more stable, parameter estimates, increased reliability of measures, less violation of

assumptions of normality, fewer idiosyncratic item characteristics, and a more simplified model interpretation (Hau & Marsh, 2004). These were created by conducting separate exploratory factor analyses for each scale, ranking the items by factor loading, and then allocating items to parcels (3 for each scale) using an item-to-construct balance procedure (i.e., allocating a mixture of high and low loading items to each parcel; Little, Cunningham, Shahar, & Widaman, 2002). The smaller scales (goal orientation) were represented by their items.

We assessed a measurement model to ensure that the latent variables could be represented by their parcels or items and all latent variables were independent. We then tested the hypothesized structural model and assessed if career identity (exploration and commitment) mediated between goal orientation and the two outcome variables (career strategies and career distress). We assessed model fit using Chi-square (χ^2 ; with a sample > 250 and 21 observed variables, a significant p value is expected), the Normed Chi-square ($\chi^2/df < 3.0$ is a good fit), the Comparative Fit Index (CFI > .92), and the Root Mean-Square Error of Approximation (RMSEA < .07; Hair, Black, Babin, & Anderson, 2010).

The measurement model demonstrated a good fit: $\chi^2(167) = 281.97, p < .05, \chi^2/df = 1.69, CFI = .97,$ and $RMSEA = .05$. There were no cross-loadings of note and all standardised regression weights were significant ($p < .001$; range .75 to .94). When we tested the structural model, we controlled for age as this was associated with commitment and satisfaction. This also showed a good fit: $\chi^2(191) = 336.96, p < .001, \chi^2/df = 1.76, CFI = .97,$ and $RMSEA = .05$. Significant paths were mastery- and performance-approach to exploration, performance-avoid to commitment, commitment to distress, and exploration to strategies and distress. This indicated that higher levels of mastery- and performance-approach were associated with more exploration, higher levels of performance-avoid were associated with more commitment, higher levels of exploration were associated with more use of strategies and more distress, and higher levels of commitment were associated with more distress. There were non-significant

paths from mastery- ($\beta = -.04, p = .55$) and performance-approach to commitment ($\beta = -.10, p = .12$), performance-avoid to exploration ($\beta = -.03, p = .62$), and commitment to strategies ($\beta = .01, p = .84$). Mastery- and performance-approach accounted for 16% of the variance in exploration, performance-avoid accounted for 20% in commitment, commitment accounted for 70% in distress, and exploration accounted for 43% in strategies. See Figure 2 for this final model. As a manipulation check, we ran two alternate models: a fully reversed model (strategies/distress \rightarrow career identity \rightarrow goal orientation) and an alternate mediation model (goal orientation \rightarrow strategies/distress \rightarrow career identity). Both of these had poorer fit than the hypothesised model.

From the above, exploration potentially mediated between mastery- and performance-approach and strategies and distress, and commitment potentially mediated between performance-avoid and distress. The above analysis demonstrated associations between the predictors and the mediators and between the mediators and the outcomes. In a separate model, we tested the direct relationships between the predictors (mastery-approach, performance-approach, performance-avoid) and the outcomes (strategies, distress). Mastery- ($\beta = .23, p < .001$) and performance-approach ($\beta = .23, p < .001$) were associated with strategies, and performance-avoid was associated with satisfaction ($\beta = .38, p < .001$). Finally, we assessed the indirect effects using AMOS bootstrapping (1000 samples to calculate SEs and 95% bias-corrected CIs; mediation occurs when the 95% CI of the indirect effect does not include zero; Preacher & Hayes, 2008). Exploration fully mediated between mastery- (CIs .60 to 2.12) and performance-approach (CIs .49 to 1.48) and strategies, and commitment mediated between performance-avoid and distress (CIs .73 to 1.73). The relationship between performance-avoid and distress remained significant, indicating that this mediation effect was partial. The total effect of performance-avoid on distress was 71%, with 45% explained via the mediator. This significant path was added to Figure 2.

Discussion

We took a goal-oriented approach to examine the relationships among goal orientation, career identity, career strategies, and career distress, and assess whether career identity mediated between goal orientation and strategies and distress. First, we found that the individual difference variables of goal orientation were associated with career identity (with both exploration and commitment). Consistent with most previous research, both mastery approaches were associated with more exploration. Exploration can be considered a positive outcome for the individual as it represents active engagement with the environment and self-examination, which are both critical for, among other things, the development of personal values and goals, identifying desirable life pathways (Blustein, 1997), and formulating a career identity (Marcia, 1980). The underlying motivations for career exploration might differ for the two approaches (i.e., mastery is focused more on personal development; performance-approach focused on demonstrating competence), but these results suggest that both approaches are associated with this aspect of career identity, likely to the benefit of the individual.

Performance-avoid orientation, on the other hand, was unrelated to exploration. We expected a negative association, which is consistent with most previous studies for a range of outcomes (e.g., less confidence in career decision-making, less optimism, and lower aspirations; Creed, Fallon et al., 2009; Creed et al., 2013). However, our finding still reflects a poor outcome for the individual, as it suggests that holding this orientation does not stimulate exploration, which is limiting for the individual (e.g., regarding career engagement and choice, as well as in identity development; Meeus, 2011). This inaction can be seen to reflect self-handicapping on the part of the individual, for while this approach might alleviate stress and concerns in the short-term, it is likely to have negative effects in the long-run, both economically and personally (Urdan & Midgley, 2001).

Both mastery- and performance-approach orientations were unrelated to career commitment. We expected this, as commitment to a particular direction would restrict the individual to a narrow direction and limit consideration of alternate, developing, or serendipitous opportunities; that is, reflect an identity foreclosure (Marcia, 1980). Foreclosure should be unrelated to mastery-approach, as the focus of this orientation is on continuing development, and should be unrelated to performance-approach, where the need is to respond to opportunities to be able to demonstrate competencies. Identity foreclosure in young adults is detrimental in labour markets where traditional careers are in rapid decline and new career arrangements, such as the protean career, are in ascendance (Briscoe & Hall, 2006). Again, while the underlying motivations might differ for the two orientations (i.e., development vs. demonstration) holding either should advantage the individual. Mastery- and performance-approach orientations thus reflect the best of both worlds in relation to career identity: they are associated with higher levels of exploration and unrelated to foreclosure.

We anticipated performance-avoid orientation to be associated with less commitment (as committing to a direction would involve decision-making and taking a stand); however, we found it to be associated with more commitment. There are several potential explanations for this positive relationship. It might reflect foreclosure, which could be driven by compliance to external pressures (e.g., from parents) to do or become a certain person, reflect a desire to have a socially acceptable position of knowing what one is doing, or making an uninformed choice to avoid more complex considerations and decisions. While foreclosure might satisfy some normative standards and reduce anxiety about engaging with the career development process, given the emerging shape of world-wide labour markets (LaPointe, 2010) and the limitations inherent for career identity development (Meeus, 2011), this finding suggests negative personal and career outcomes for avoidant individual. Future research needs to tease out the reasons for this result and assess whether intervening mediators or moderators increase our understanding

of the relationship. Given these considerations, performance-avoid individuals are poorly placed for personal and career development as this orientation is unrelated to career exploration and associated with more commitment.

Goal orientation also had direct and indirect associations with career-related strategies and distress (exploration fully mediated between mastery- and performance-approach and strategies; commitment partially mediated between performance-avoid and distress; performance-avoid was directly associated with distress; see Figure 2). First, this suggests that when approach oriented young adults engage in career exploration, this stimulates greater use of career-related strategies, such as networking, seeking guidance, and improving self-presentation. These mediated relationships reinforce the value of an approach orientation and indicate a mechanism by which personal resources influence the thoughts and strategies adopted to assist future occupational engagement and achievement. This mechanism is consistent with Cellar et al.'s (2011) conclusion that approach orientations influence self-regulation, which, in turn, has positive associations with effort, behaviours, and outcomes. According to dynamic, goal-directed models of career development, these actions and behaviours then generate feedback, which, in turn, reinforce approach-oriented activities and inform future exploration (e.g., Hall & Chandler, 2005; Lent et al., 1994).

Second, performance-avoid was directly related to career distress and indirectly related via commitment. Negative associations with well-being measures have been widely reported in the literature (Payne et al., 2007), and previous studies have also suggested that performance-avoid is associated with poorer self-monitoring and self-regulation, which in turn leads to poorer outcomes, helplessness, and dissatisfaction (Cellar et al., 2011). If considered from a cyclic perspective (i.e., performance-avoid → commitment → distress, which then feeds back on goal approach and commitment), the mechanism for this involves negative affect reinforcing avoidance and self-regulatory strategies and leading to more distress). When trait-based

variables are involved (e.g., goal orientation), these patterns tend to recur across time and in different situations (Diefendorff & Lord, 2008).

Finally, both exploration and commitment were associated with more distress, and exploration was associated with greater use of career strategies. The positive relationship between exploration and distress was weak, and might reflect some anxiety that young adults have in relation to their career situation as they approach transitioning to the workforce. This might apply particularly to our sample of university students whose situation forces them to assess how competitive they are against their peers. The positive association between commitment and distress was stronger, and counter to other research, which suggested that both commitment (e.g., Hirschi, 2012b) and identity (Skorikov & Vondracek, 2007, 2011) are associated with positive outcomes. However, the relationship is consistent with our argument that foreclosure for young, Western adults is likely to be restrictive rather than enabling, and career distress might spring from this knowledge and insight. The young adults in our study were university students, who, by virtue of their situation as enrolled students, had made commitments to their particular discipline, and, by implication, commitment to an occupational direction based on this discipline. Young adults enter university and commit to a pathway that might not be their preferred choice, but is the program available to them. When they commence their course, they might not like it, might not do well at it, or might perceive that later occupational avenues are limited or not as desirable as originally thought (Creed & Hughes, 2012). Such insights and doubts develop as a result of their university experiences and personal maturation processes (Albion, 2000) and can be related to dissatisfaction as the outcomes are not what were anticipated.

The positive association between exploration and strategies is consistent with career identity reflecting career agency, which, as it develops, results in the growth and use of increasingly sophisticated thoughts and actions regarding career direction (Hirschi, 2012b).

Career exploration, specifically, reflects examination of the self and its relationship to the world of work, with exploration leading to an escalation of actions, such as seeking out more detailed information, networking with others with similar interests, and deliberately setting out to develop relevant skills (Porfeli & Lee 2012).

Our study contributed to the understanding of career identity in a number of ways. First, by testing the relationship between goal orientation and career identity, which has not been done previously, we identified a potentially important antecedent to career identity. As career identity development involves the identification, management, and pursuit of career-related goals, it makes sense that goal orientation should be associated with career identity and its development. Second, as we operationalised career identity as career exploration and commitment, which is consistent with theory (Marcia, 1980), but not always done (cf. Hirschi, 2012a), we were able to demonstrate different relationships between the components of career identity and their antecedents, suggesting that examining career identity in this light allows for more nuanced interpretation of correlates. Third, as we found unanticipated associations (e.g., commitment related positively to distress), we demonstrated that higher levels of some elements of career identity are not always associated with positive outcomes.

There are implications from the study for practice. Those working with young adults should consider how their clients approach goal-setting and management, as those with different orientations require different interventions. Young adults with an avoidant orientation would benefit from interventions that foster approach strategies generally, and might need assistance with specific career goals so that they do not restrict exploration and foreclose without full consideration of what is best for them. Structured interventions have been devised to improve educational outcomes in school children (Kaplan & Maehr, 2007) and employment outcomes for unemployed adults (Van Hooft & Noordzij, 2009), and could be devised to improve career progress and outcomes. Performance-avoid was associated with more career distress, and

young adults with this orientation might benefit from strategies that can reverse this, such as developing connections between engagement, success, and satisfaction; rather than using avoidance strategies to manage anxiety. Our results showed no association between commitment and career strategies, suggesting that commitment might stymie the development of strategies that young adults need to progress their goals, and this could be explored with committed clients.

We tested plausible directional relationships between person resources (goal orientation), career identity (exploration, planning), and affective, cognitive, and behavioural outcomes (career strategies and distress). However, the study was cross-sectional, and while our model fitted better than alternative models, longitudinal data are required to confirm the associations over time. The dynamic models of career development (e.g., Hall & Chandler, 2005) suggest interplay among career variables; thus, full longitudinal models should identify reciprocal relationships over time rather than direct causal relationships. Our sample contained disproportionately more young women than men, and the relationships need to be tested on other samples to allow for wider generalisation. Also, we assessed one aspect of career exploration and one aspect of career commitment, and as both of these variables can be considered multi-dimensional (Porfeli & Lee, 2012), more detailed models need to be assessed. We found both anticipated and unexpected relationships between career identity and strategies and distress, but as career identity is such an important and pervasive developmental construct, other outcomes should be assessed. Only in this way will a comprehensive nomological net to career identity be identified. This is important if young adults are to be assisted to develop healthy identities specific to the career domain and career identity is to be remediated when its development goes awry. Healthy career identity is associated with many psychological, psychosocial, and occupational benefits; however, many young people find the career

development process challenging, and even distressing (Skorikov & Vondracek, 2011). Hence, there is great potential benefit to young people if they are assisted to manage this process well.

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Table 1

Summary Data, Bivariate Correlations (below Diagonal), and Latent Variable Correlations (above Diagonal); N = 213

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Mastery-approach	15.00	2.41	-	.34***	.04	.30***	-.10	.31***	-.07
2. Performance-approach	12.74	3.36	.33***	-	.09	.33***	-.07	.30***	-.03
3. Performance-avoid	12.78	3.52	.01	.04	-	.01	.37***	.05	.41***
4. Career exploration	43.89	8.48	.28***	.32***	-.01	-	-.17*	.65***	.01
5. Career commitment	58.31	17.10	-.10	-.06	.31***	-.13*	-	-.08	.82***
6. Career strategies	94.68	18.32	.29***	.30***	.02	.59***	-.10	-	-.06
7. Career distress	39.32	13.99	-.08	-.02	.33***	.01	.78***	-.07	-
8. Age	26.01	9.54	.20**	-.03	-.21***	.04	-.28***	.07	-.20**
9. School achievement	2.10	0.84	.03	-.16**	-.05	-.07	-.02	-.09	-.03
10. Gender	-	-	-.07	-.08	-.11	-.04	-.01	-.03	-.03

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

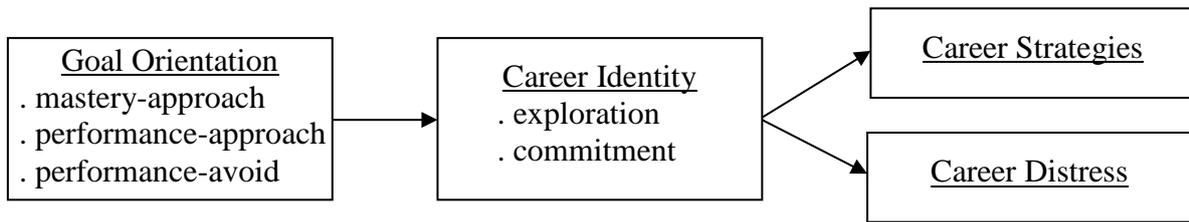


Figure 1. Career identity mediates between goal orientation and career-related behaviours and distress.

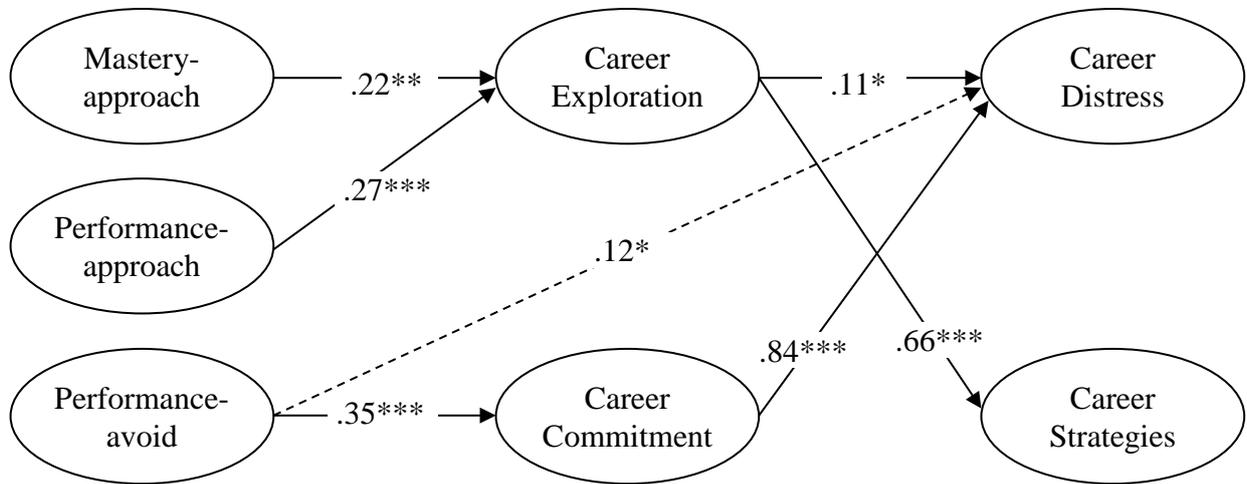


Figure 2. Exploration fully mediates between mastery-approach and strategies, and between performance-approach and strategies. Commitment partially mediates between performance-avoid and distress. Unbroken paths indicate results from structural analysis; dashed path is direct relationship identified in mediation analysis. Non-significant paths not included to avoid clutter. Standardised regression weights reported.