The role of personality in adolescent career planning and exploration: A social cognitive perspective

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Abstract

Social cognitive career theory (SCCT) recognises the importance of individual differences and contextual influences in the career decision-making process. In extending the SCCT choice model, this study tested the role of personality, social supports, and the SCCT variables of self-efficacy, outcome expectations and goals in explaining the career readiness actions of career planning and exploration. The authors surveyed 414 Australian high school students in Years 10, 11 and 12. Career exploration was associated with goals and social supports, whereas career planning was associated with self-efficacy, goals, personality and an interaction term for goals and social support that indicated that levels of planning were highest when social support and goals were highest. Implications for parents, teachers and guidance counsellors as well as recommendations for future research directions are discussed.

The final school years are critical in the career decision-making process, as this is when students typically begin to plan, explore and make decisions about employment or further education. The contemporary generation of school seniors have multiple career options available, and factors such as individual personality and contextual influences add complexity to the career decision-making process.

Whilst personality, social cognitive career theory (SCCT), and career readiness variables such as planning and exploration are all areas of importance that have generated investigation, little research has examined all three areas of career development together. Moreover, studies using university or college-aged American or European samples prevail, while research involving career choice behaviour within high school settings is lacking. In an effort to incorporate a multidimensional approach using conceptually related constructs, the present study examined the career decision-making process of high school students.

Based on a review of the literature, and with an aim to extend the SCCT choice model (Lent, Brown, & Hackett, 1994) to explore the career decision-making process, we expected that personality would predict planning and exploration and that this relationship would be mediated by the SCCT variables of self-efficacy, outcome expectations and goals. Specifically, based on the review by Tokar et al. (1998), recent studies by Savickas et al. (2002), Judge and Ilies (2002) and Blustein and Flum (1999), and Super's (1980) characterisation of exploration, we expected individuals who were high on conscientiousness, extraversion and openness to engage in more career planning and exploration behaviours, and individuals who were high on neuroticism to engage in fewer such behaviours. As there was no past research on agreeableness, we did not have a prediction for this variable.

We expected self-efficacy, outcome expectations and goals to be associated with career planning and exploration, and that goals would mediate the relationship between the explanatory

variables of self-efficacy and outcome expectations and the outcome variables of planning and exploration. That is, career confident individuals with higher career outcome expectations would be more likely to set higher career related goals and engage in more career planning and exploration. It was further predicted that the relationships between goals and career planning, and between goals and career exploration, would vary under different conditions of social support; specifically, we expected a stronger relationship between goals and behaviours in the presence of higher social support. Figure 1 depicts the career decision-making model under investigation. The model, based on a portion of the SCCT choice model developed by Lent et al. (1994), extends the choice model to the domain of career decision-making by incorporating direct pathways between person inputs and choice goals, and between person inputs and choice actions. The 5-factor model of personality is used to operationalise person inputs, and career planning and career exploration are used to operationalise choice actions.
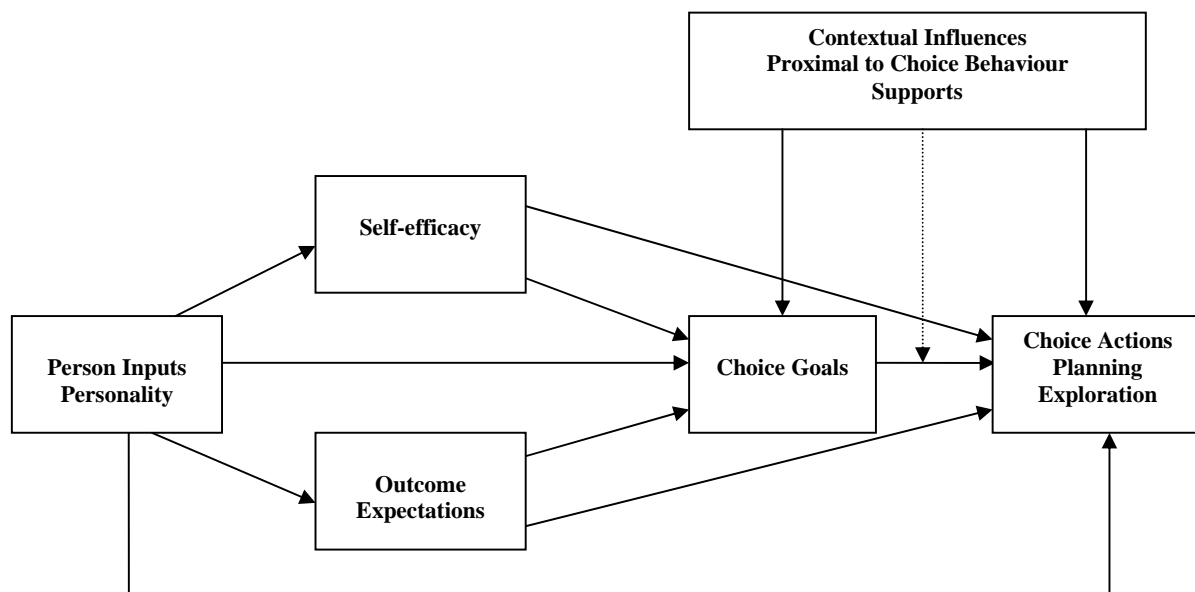

Figure 1. Proposed paths from person and contextual inputs to career planning and exploration. Adapted from the model of person, contextual, and experiential factors affecting career-related choice behaviour (Lent et al., 1994).

Methods

Participants

We surveyed 540 high school students who were in Years 10, 11 and 12. Of these, 126 surveys were not usable, which left 414 participants in the sample. Unusable surveys resulted primarily because some students had to leave the testing session early due to other school commitments. A small number were unusable due to missing data. Over 90% of the students were Caucasian, which is typical of schools in Australia. One-hundred-and-sixty-six students (40%) were in Year 10, 133 (32%) were in Year 11, and 115 (28%) were in Year 12. The sample comprised 226 females (55%) and 188 males (45%), whose mean age was 15.86 years (*SD* = 0.99; Range = 14.15-19.72). On a six-point self-report measure of school achievement (of 1 = LA+, 2 = SA, 3 = SA+, 4 = HA, 5 = HA+, 6 = VHA, where LA = low achievement , SA = satisfactory achievement, HA = high achievement, and VHA = very high achievement), 30 (7%) achieved VHA, 74 (18%) achieved HA+, 156 (38%) achieved HA, 92 (22%) achieved SA+, 59 (14%) achieved SA, and three students (1%) indicated they typically achieved LA+. The participating high school was co-educational, public (i.e., government run), and located in an outer suburb of a large city on the east coast of Australia.

Materials

Career Choice Actions. This was operationalised in two ways, by measuring students' attitudes toward career planning and exploration. Planning for a career and exploring potential career options are actions designed to implement one's goals to progress vocational development. Career planning and career exploration were measured using two subscales of the Australian version of the Career Development Inventory (CDI-A, Lokan, 1984), which was developed for use by students in Years 8 to 12. The 20-item career planning subscale measures the type and degree of career planning undertaken. Items include "How much have you thought and planned

about: (i) Finding out about educational and job possibilities by going to the library, sending away for information, or talking to someone who knows; (ii) Taking part in school or out-of-school activities that will help you decide what kind of work to go into when you leave school". The career planning scale uses a 4-point response format with endpoints of *I have not thought about this at all* to *I have made definite plans, and have started to carry them out or know what to do to carry them out*. The 16-item career exploration subscale measures the range and usefulness of career exploration undertaken. Items include "Would you get help from any of these people when making plans for work or further education", and "Which of the following have already given you help or directed you towards helpful information?", with options of *family, teachers, friends, career advisors, printed materials,* etc. Higher scores indicate more planning and more exploration respectively. Internal consistency coefficients are reported in the manual as .88 for career planning and .78 for career exploration for a Year 11 sample (Lokan), and represent similar psychometric properties to those reported in the user's manual for the American Career Development Inventory (career planning .89 and career exploration .78; Thompson & Lindeman, 1981). Research conducted in both Australia (e.g., Patton & Creed, 2001) and South Africa (e.g., Patton, Watson, & Creed, 2004) report associations between the CDI-A and other career variables in the expected directions, and report internal reliability coefficients similar to those reported in the manual. The internal reliability coefficients for the present study were .91 for career planning and .83 for career exploration.

 Self-efficacy. This was measured by using the 25-item Career Decision-Making Self-efficacy Scale (Short Form; Betz, Klein, & Taylor, 1996), which assesses students' beliefs about their capacity to make career-related decisions. Students were asked to indicate their level of confidence on a 5-point scale, with endpoints of *no confidence at all* to *complete confidence*, to questions, such as, "How confident are you that you could decide what you value most in an

occupation?" and "How confident are you that you could choose a career that will fit your interests?" Higher scores indicate higher efficacy. Validity evidence has been based on expected associations with a range of other career-related constructs, such as career indecision (Betz et al., 1996), career outcome expectations and exploratory intentions (Betz & Voyten, 1997), while internal reliability coefficients are typically reported to be high (e.g., Creed, Patton, & Watson, 2002). The internal reliability coefficient for the current study was .93.

Outcome Expectations. These were assessed using the Career Decision-Making Outcome Expectancies Scale (Betz & Voyten, 1997). This 9-item scale measures perceived long-term consequences of success in specific educational and career decision-making behaviours. Five items assess beliefs with regard to the relevance of educational performance to future career options and success, and four items assess the belief that certain behaviours would be useful to subsequent career options and decisions. Sample questions include, "If I try hard enough, I will get good grades", "If I learn more about different careers, I will make a better career decision" and "If I know my interests and abilities, then I will be able to choose a good career". We used a 4-point Likert response format with endpoints of *strongly disagree* to *strongly agree*. Higher scores indicate higher career outcome expectations. Betz and Voyten found that outcome expectations were related to other variables in the expected direction, supporting the validity of the scale. For example, outcome expectations was positively related to decision-making self-efficacy and negatively related to indecision. These authors reported coefficient alpha values of .77 (educational outcome) and .79 (career outcome) based on a university student sample. The internal reliability coefficient for the present sample for the total scale was .83.

Career Goals. A 6-item scale, originally devised by Mu (1998), was used to measure the level of career related goal-setting. Students were asked to indicate their agreement with each item (e.g., "I have a clear set of goals for my future" and "I am taking the steps necessary to

achieve my career goals") on a 4-point scale with endpoints of *strongly agree* to *strongly disagree*. This gave a possible range of 6-24, with higher scores representing more career related goal-setting. Mu reported an internal reliability coefficient value of .92 based on a sample of high school students and demonstrated initial validity for the scale based on expected associations with other career-related constructs. Patton, Bartrum, and Creed (2004) reported an internal reliability coefficient of .90, and, in support of the scale's validity, found that the scale was associated with the career variables of planning, exploration and expectations in the expected directions. In the present study, the internal reliability coefficient was .85.

Personality. The NEO Five-Factor Inventory was used to assess the "big-five" personality characteristics of neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. This 60-item inventory is the short form of the NEO Personality Inventory - Revised (Costa & McCrae, 1992). Briggs (1992) claimed that it was the best measure of the 5-factor model. The short version has been shown to be reliable and to have a factor structure comparable with that of the full scale test (Saucier, 1998). It takes approximately 10-15 minutes to complete, and contains five 12-item subscales, each with 5-point response format endpoints of *strongly disagree* to *strongly agree*. The test manual (Costa & McCrae, 1992) reports correlations between the short and long versions of the test of between .75 and .89, presents evidence for the Inventory's construct validity, and reports reliability coefficients ranging from .74 to .89. Internal reliability coefficients for the present sample were .85 (neuroticism), .79 (extraversion), .77 (openness to experience), .70 (agreeableness) and .83 (conscientiousness).

Career Supports. Perceived supports was measured using the Career Influence Inventory (CII; Fisher & Stafford, 1999). The CII explores students' beliefs and expectations about career supports and influences for aspects of career development that includes school performance, university plans and career plans from parents, teachers, friends and the social environment. The

inventory uses a 5-point Likert response format ranging from *strongly agree* to *strongly disagree*, with higher scores indicating more career support. We used 22 items from the Career Influence Inventory. These included the parent, teacher and friends' influence questions, and the ethnic and gender expectation questions. As it was desirable to assess financial support, an item about parental financial support was added to the scale. The added item was "My parents/guardians will provide sufficient financial support for me to continue with my studies or training after I finish school". Sample original items included "My parents/guardians are interested in my career plans", "My friends encourage me to do my best in school", and "My teachers are interested in me, not just in how I do in school". Fisher and Stafford reported internal consistency coefficients of .91 for parent influence, .90 for teacher influence, .74 for friends' influence and .75 for ethnic and gender expectations. Cronbach's alpha for the entire scale was .89. Factor analysis revealed six individual support factors that influenced career planning. However, we report an overall score for the adapted 22-item inventory, based on uniformly high corrected item-total correlations. The internal reliability coefficient for the full scale was .89, both with and without the added financial item. Associations between the CII and self-efficacy, outcome expectations, goals, planning and exploration were in the expected direction, indicating good concurrent validity. For example, those with a high level of support reported more career planning and exploration.

<div align="center">Results</div>

Overview of Analysis

Two hierarchical multiple regression analyses were conducted to test the relationship between the predictor variables of personality, self-efficacy, outcome expectations, goals and supports, and the outcome variables of career planning and career exploration. These analyses were used for logical and theoretical reasons. First, hierarchical regression analyses can

determine the relative contributions of the predictor variables on the outcome variables. Second, they can test the moderating effects of support on the relationship between the goals and the outcome variables (using interaction terms), and determine the amount of variance accounted for by the interaction term. Third, they can test for mediation, where the standardised beta weight for a predictor variable (or set of variables) at one step of the analysis may be reduced at the next step when another predictor variable (or set of variables) is included.

Predicting Career Planning

All predictor variables and school achievement were significantly, bivariately correlated with career planning (see Table 1). School achievement was entered at Step 1, to control for its effect. The personality variables (neuroticism, extraversion, openness, agreeableness, conscientiousness) were entered at Step 2, to determine their direct effects on career planning. Self-efficacy and outcome expectations were entered at Step 3, as they were expected to mediate the relationship between the personality variables and career planning. A mediating relationship is demonstrated: (a) when there are significant relationships among the predictor, mediator and outcome variables, and (b) when there is a reduction in the relationship between the predictor and outcome variable in the presence of the mediator. Full mediation occurs when the influence of an initial predictor (or set of predictor variables) is reduced to zero; partial mediation occurs when this influence is substantially reduced (Baron & Kenny, 1986; James & Brett, 1984). Thus, the predictor variables at Step 2 of the regression analysis should account for significant variance in the outcome variable, and when the mediator variables are included at Step 3, the effects of the predictor variables at Step 2 should be reduced (Jimmieson, Terry, & Callan, 2004). Goals was entered at Step 4, as this was expected to mediate the relationship between all predictor variables and career planning. Support was entered at Step 5 to test its effect on career planning. The interaction term (goals x support) was entered at Step 6 to test whether support moderated the

relationship between goals and career planning. Centred scores were used for the interaction terms to avoid multicollinearity (Aikin & West, 1991).

Insert Table 1 about here

School achievement, entered at Step 1, accounted for a significant 2.4% of the variance in career planning, $F(1, 412) = 9.95$, $p < .01$. Students who reported higher school achievement also reported more career planning. At Step 2, adding the personality variables accounted for a further significant 16.4% of the variance, $F_{Change}(5, 407) = 16.42$, $p < .01$. Students who reported more conscientiousness ($\beta = .36$, $p = .01$, $sr^2 = 9.49\%$) and openness ($\beta = .19$, $p < .01$, $sr^2 = 3.31\%$) reported more career planning. School achievement no longer made a significant, unique contribution. At Step 3, the addition of self-efficacy and outcome expectation accounted for a further significant 14.9% of the variance, $F_{Change}(2, 405) = 45.55$, $p < .01$. Students who reported higher self-efficacy ($\beta = .42$, $p < .01$, $sr^2 = 11.63\%$), conscientiousness ($\beta = .21$, $p < .01$, $sr^2 = 2.96\%$) and openness ($\beta = .13$, $p < .01$, $sr^2 = 1.51\%$) reported more career planning. At this step, the addition of self-efficacy and outcome expectations reduced the standardised beta weights for conscientiousness (from .36 to .21) and openness (from .19 to .13). This indicated a partial mediating role for self-efficacy; outcome expectations did not meet the criterion for being a mediator, as it was not significantly associated with the outcome variable at this step. At Step 4, the addition of goals accounted for a further significant 13.3% of the variance, $F_{Change}(1, 404) = 101.52$, $p < .01$. Students who reported higher goals ($\beta = .50$, $p < .01$, $sr^2 = 13.32\%$), more self-efficacy ($\beta = .21$, $p < .01$, $sr^2 = 2.34\%$), higher levels of openness ($\beta = .13$, $p < .01$, $sr^2 = 1.56\%$) and conscientiousness ($\beta = .11$, $p < .05$, $sr^2 = 0.77\%$) reported more career planning. The addition of goals reduced the standardised beta weights for self-efficacy (from .42 to .21) and conscientiousness (from .21 to .11), indicating a partial mediating role for goals. There was no change to openness ($\beta = .13$). Support, at Step 5, did not account for further significant variance,

$F_{Change}(1, 403) = 0.99$, $p = .32$. At Step 6, adding the goals x support interaction term added a further, significant 2.8% of variance, $F_{Change}(1, 402) = 22.25$, $p < .01$. At this final step, the predictor variables accounted for a total of 49.9% of the variance in career planning, $F(11, 402) = 36.39$, $p < .01$. The significant, unique predictors were: goals ($\beta = .48$, $p < .01$, $sr^2 = 12.18\%$), the goals x support interaction term ($\beta = .19$, $p < .01$, $sr^2 = 2.79\%$), self-efficacy ($\beta = .21$, $p < .01$, $sr^2 = 2.25\%$), openness ($\beta = .12$, $p < .01$, $sr^2 = 1.23\%$) and conscientiousness ($\beta = .10$, $p < .05$, $sr^2 = .58\%$). The analysis summary is reported in Table 2.

Insert Table 2 about here

The significant interaction indicated that the relationship between goals and career planning was conditional upon the level of support perceived by the students. The interaction was probed following the procedures recommended by Aiken and West (1991). The values of the moderator (support) were chosen 1 *SD* above and 1 *SD* below the mean to form simple regression equations and the interaction plotted (see Figure 2). The interaction effect indicated that for low levels of support, as higher goals are set, students engage in more career planning. A similar effect occurs when there are high levels of support, except that in this situation, as higher goals are set there is a greater increase in the level of career planning. For medium levels of support, the increase in career planning falls in between the high support and low support groups.
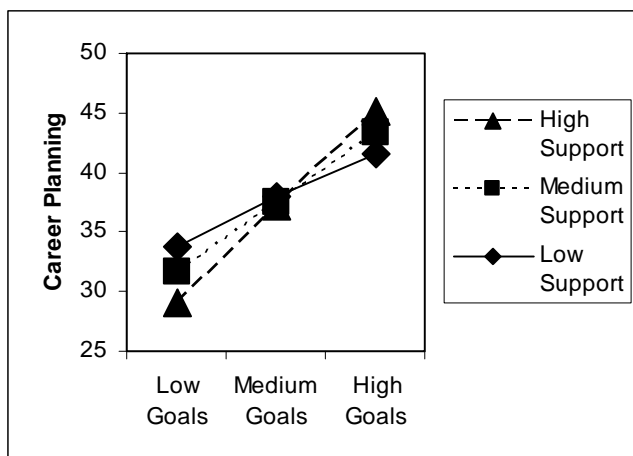
Figure 2. Interaction effects of goals and supports on career planning
Predicting Career Exploration

All predictor variables (with the exception of neuroticism) and age were significantly, bivariately correlated with career exploration (see Table 1). Thus, age was entered at Step 1. The personality variables (with the exception of neuroticism) were entered at Step 2. Self-efficacy and outcome expectations were entered at Step 3. Goals was entered at Step 4. Support was entered at Step 5, and the interaction term (goals x support) was entered at Step 6.

Age, entered at Step 1, accounted for a significant 4.4% of the variance in career exploration, $F(1, 412) = 18.93$, $p < .01$. Older students reported more career exploration. At Step 2, adding the personality variables accounted for a further significant 10.0% of the variance, $F_{Change}(4, 408) = 11.97$, $p < .01$. Older students ($\beta = .21$, $p < .01$, $sr^2 = 4.08\%$) who were more conscientious ($\beta = .25$, $p < .01$, $sr^2 = 5.06\%$) and more extraverted ($\beta = .13$, $p = .01$, $sr^2 = 1.42\%$) reported more career exploration. At Step 3, the addition of self-efficacy and outcome expectations accounted for a further significant 5.2% of the variance, $F_{Change}(2, 406) = 13.04$, $p < .01$. Older students ($\beta = .20$, $p < .01$, $sr^2 = 3.96\%$) with higher self-efficacy ($\beta = .23$, $p < .01$, $sr^2 = 3.65\%$) and higher levels of conscientiousness ($\beta = .15$, $p < .01$, $sr^2 = 1.46\%$) reported more career exploration. At this step, the addition of self-efficacy and outcome expectations reduced the standardised beta weights for conscientiousness (from .25 to .15) and extraversion (from .13 to .08). This indicated a partial mediating role for self-efficacy but not for outcome expectations, which was not significant at this step, and thus did not meet the criterion for mediation. At Step 4, the addition of goals accounted for a further significant 6.2% of the variance, $F_{Change}(1, 405) = 33.82$, $p < .01$. Older students ($\beta = .20$, $p < .01$, $sr^2 = 4.04\%$) with higher goals ($\beta = .34$, $p < .01$, $sr^2 = 6.20\%$) reported more career exploration. The addition of goals reduced the standardised beta weights for self-efficacy (from .23 to .10) and conscientiousness (from .15 to .09), again

indicating a mediating role for goals. The addition of support at Step 5, accounted for a further significant 1.0% of the variance, $F_{Change}(1, 404) = 5.60$, $p = .018$. Older students ($\beta = .21$, $p < .01$, $sr^2 = 4.04\%$) with higher goals ($\beta = .33$, $p < .01$, $sr^2 = 5.81\%$) and more support ($\beta = .11$, $p = .018$, $sr^2 = 1.02\%$) reported more career exploration. At Step 6, the addition of the goals x support interaction term did not add further to the explanation of variance, $F_{Change}(1, 403) = 0.02$, $p = .88$. At this final step, the predictor variables accounted for a total of 26.8% of the variance in career exploration, $F(10, 403) = 14.77$, $p < .01$. The significant, unique predictors were goals ($\beta = .33$, $p < .01$, $sr^2 = 5.76\%$), age ($\beta = .21$, $p < .01$, $sr^2 = 4.04\%$), and support ($\beta = .11$, $p = .035$, $sr^2 = .81\%$). Summary data are reported in Table 3.

Insert Table 3 about here

Discussion

The present study sought to extend the SCCT choice model (Lent et al., 1994) to the domain of career decision-making and test how personality and social support contribute to the career readiness actions of planning and exploration. Results indicate that personality and supports are related to the career choice process both directly and indirectly.

While the indirect effect of personality on choice actions is consistent with the SCCT hypothesis for person inputs, the direct effect is an important finding. Specifically, openness and conscientiousness were found to have direct relationships with planning and indirect relationships with planning via self-efficacy and goals. These findings suggest that individuals who are conscientious and open to experiences are more likely to engage in career planning. Conscientiousness and extraversion were found to have indirect relationships with exploration via self-efficacy and goals. The indirect relationship between personality and choice actions (planning and exploration), via self-efficacy and goals, supports other research that found a relationship between conscientiousness and self-efficacy and goals (Judge & Ilies, 2002).

Contrary to predictions, extraversion and neuroticism were not found to be associated with career planning, and openness and neuroticism were not related to career exploration. Agreeableness was also unrelated to planning or exploration, a finding consistent with Reed et al. (2004) in relation to exploration activities.

The finding that social supports moderate the relationship between goals and planning is consistent with the SCCT contextual hypothesis, and a significant finding in view of other research (e.g., Lent et al., 2001; Lent, Brown, Brenner, Lyons, & Treistman, 2003; Lent, Brown, Nota, & Soresi, 2003), which has found only a moderating role between supports and choice actions. The relationship between supports and planning is an interesting finding, as perceived support, in combination with goal-setting, is associated with the implementation of career planning. This suggests that high levels of social support and high levels of goal-setting will result in greater career planning activity. Perceived social support was also found to play a direct role in career exploration, verifying the direct link between contextual influences and choice actions in the SCCT choice model.

We found strong support for the relationship between goals and choice actions, and moderate support for the relationship between self-efficacy, goals and choice actions, suggesting that those who were confident of making career decisions were more likely to set career-related goals, and thus more likely to make career plans and engage in career exploration. Outcome expectations, however, was not a significant predictor in the model. This lack of a relationship between outcome expectations, goals and choice actions may be due to participants' career development level or it may be that self-efficacy for this age group is a more influential determinant of behaviour.

Age was also important in predicting career exploration. Consistent with career theorists (e.g., Crites, 1971), who maintain that there is an association between age and career maturity, we

found that older students reported a greater desire to undertake exploration activities than did younger students. This is not an unexpected finding given that, as students move closer to leaving school, they are more curious about exploring the world of work and have some imperative to do so.

Findings from this study have several implications. First, they support the important relationships among the variables presented in Figure 1, in particular, the Lent, Brown et al. (1996) assumption that social cognitive variables do not function alone, but rather, are associated with other important personal and contextual variables. Specifically, the findings highlight the value of studying personality factors (person inputs in the choice model) and contextual influences in conjunction with career decision-making to affect a more integrative approach to examining career-related processes. The relationship between personality and choice actions, directly, and via self-efficacy and goals, and the relationship between contextual influences in this instance supports, and between choice goals and choice actions, has important implications for career theory and research. Implications for practitioners such as guidance counsellors are that personality traits such as openness and conscientiousness are likely to be directly associated with goal-setting behaviour and planning, while traits such as extraversion and conscientiousness are indirectly associated with goal-setting behaviour and exploration. Parents, teachers and guidance counsellors might facilitate the career development of high school students by encouraging openness to experiences and encouraging organisational skills, such as time management, which could impact goal-setting strategies and behaviours, such as thinking about seeking knowledge (planning) and exploring career options. The association between setting goals, planning and exploration suggests that students could usefully seek support from significant others while engaging in self-directed educational and vocational planning and exploring a variety of careers.

Some limitations relating to generalizability of the findings are noted. The sample for the study was predominantly Caucasian, which is typical of high schools in Australia, and the results may not generalise to other high school students from different ethnic or racial backgrounds. Moreover, as the data were collected from one city within south-east Queensland, findings need to be cautiously applied elsewhere, and future studies might seek to replicate this study with larger, more diverse samples, ideally exploring possible changes in these relationships over a longer period of time to enhance understanding of the influence of personality and contextual influences. A further potential limitation is that the constructs of interest were measured using generalised career decision-making attitude scales (e.g., career decision-making self-efficacy) rather than scales that were specifically associated with planning and exploration. Future research needs to be conscious of linking the predictor variables with the outcome variables (Betz & Hackett, 2006; Lent & Brown, 2006).

This research has extended the SCCT choice model to the process of career decision-making and examined the self-reported career decision-making readiness actions of high school students. It extends and builds on earlier research and theory, and highlights the interactive role that personality and contextual variables play in the career decision-making process.

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Table 1

Summary data and bivariate correlations for all measures used in the study; N = 414

Variables	M	SD	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Career planning	63.00	11.98	.51**	.53**	.34**	.64**	.27**	-.16**	.17**	.23**	.13*	.39**	.15**	.09	.01
2. Career exploration	36.96	9.56		.35**	.24**	.43**	.27**	-.05	.21**	.11*	.11*	.29**	.02	.21**	-.06
3. Self-efficacy	94.22	14.77			.48**	.60**	.30**	-.27**	.30**	.22**	.21**	.42**	.29**	.04	-.10*
4. Outcome expectations	29.86	3.94				.53**	.32**	-.15**	.22**	.12*	.20**	.43**	.21**	-.03	-.02
5. Career Goals	18.45	3.43					.31**	-.19**	.21**	.12*	.17**	.45**	.12*	.00	.01
6. Supports	81.13	12.63						-.17**	.29**	.11*	.23**	.38**	.25**	-.02	-.10*
7. Neuroticism	33.47	8.06							-.34**	-.03	-.28**	-.33**	-.14**	.10*	-.23**
8. Extraversion	44.48	6.33								.11*	.28**	.31**	.18**	-.01	-.23**
9. Openness	37.71	5.71									.11*	.12*	.25**	.14**	-.15**
10. Agreeableness	41.19	5.57										.34**	.16**	-.08	-.18**
11. Conscientiousness	42.40	6.77											.31**	.00	-.03
12. School achievement	3.79	1.13												-.10*	-.10*
13. Age	-	-													.03
14. Gender	-	-													-

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

Table 2

Summary data for hierarchical regression analysis for variables predicting career planning; N = 414.

Variable	Step 1 B	Step 1 SEB	Step 1 β	Step 2 B	Step 2 SEB	Step 2 β	Step 3 B	Step 3 SEB	Step 3 β	Step 4 B	Step 4 SEB	Step 4 β	Step 5 B	Step 5 SEB	Step 5 β	Step 6 B	Step 6 SEB	Step 6 β
School achievement	1.62	.51	.15**	-.10	.51	-.01	-.70	.47	-.07	-.09	.42	-.01	-.14	.43	-.01	.06	.42	.01
Neuroticism				-.04	.07	-.03	.03	.07	.02	.01	.06	.01	.01	.06	.01	.02	.06	.01
Extraversion				.09	.09	.05	-.03	.09	-.02	-.02	.08	-.01	-.04	.08	-.02	-.02	.08	-.01
Openness				.40	.10	.19**	.27	.09	.13**	.28	.08	.13**	.28	.08	.13**	.25	.08	.12**
Agreeableness				-.08	.11	-.04	-.09	.10	-.04	-.08	.09	-.04	-.08	.09	-.04	-.02	.09	-.01
Conscientiousness				.63	.09	.36**	.38	.09	.21**	.20	.08	.11*	.19	.08	.11*	.18	.08	.10*
Self-efficacy							.34	.04	.42**	.17	.04	.21**	.17	.04	.21**	.17	.04	.21**
Outcome expectations							.19	.15	.06	-.22	.14	-.07	-.23	.14	-.08	-.21	.14	-.07
Career goals										1.74	.17	.50**	1.73	.17	.50**	1.68	.17	.48**
Supports													.04	.04	.04	-.04	.04	-.04
Career goals x Supports																.05	.01	.19**
ΔR^2						16.4**			14.9**			13.3**			0.1			2.8**
R^2			2.4**			18.7**			33.7**			47.0**			47.1**			49.9**
Adjusted R^2			2.1**			17.5**			32.4**			45.8**			45.8**			48.5**

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

Table 3

Summary data for hierarchical regression analysis for variables predicting career exploration; N = 414.

Variable	Step 1			Step 2			Step 3			Step 4			Step 5			Step 6		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Age	2.02	.47	.21**	1.97	.45	.21**	1.95	.44	.20**	1.97	.42	.20**	1.98	.42	.21**	1.98	.42	.21**
Extraversion				.19	.07	.13*	.13	.07	.08	.14	.07	.09	.11	.07	.07	.11	.07	.07
Openness				.06	.08	.04	-.00	.08	-.00	.01	.07	.01	.01	.07	.00	.01	.07	.00
Agreeableness				-.01	.09	-.00	-.02	.08	-.01	-.01	.08	-.01	-.02	.08	-.01	-.02	.08	-.01
Conscientiousness				.35	.07	.25**	.21	.08	.15**	.12	.07	.09	.09	.08	.06	.09	.08	.06
Self-efficacy							.15	.04	.23**	.06	.04	.10	.06	.04	.09	.06	.04	.09
Outcome expectations							.14	.13	.06	-.08	.13	-.03	-.10	.03	-.04	-.10	.13	-.04
Career goals										.94	.16	.34**	.91	.16	.33**	.91	.16	.33**
Supports													.09	.04	.11	.08	.04	.11*
Career goals x Supports																.00	.01	.01
ΔR^2					10.0**			5.2**			6.2**			1.0*			.0	
R^2		4.4**			14.4**			19.6**			25.8**			26.8**			26.8**	
Adjusted R^2		4.2**			13.4**			18.2**			24.3**			25.2**			25.0**	

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