Interprofessional education for first year psychology students: Career plans, perceived

relevance and attitudes

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Abstract

Undergraduate psychology students have been largely excluded from interprofessional education (IPE) initiatives. In contrast to many health professions, undergraduate psychology students do not engage in work placements as part of their degree, and many enter careers outside the health care context. This research examines whether undergraduate psychology students' views of IPE vary according to their planned career directions, and if so, whether the perceived relevance of IPE mediates the relationships. A sample of 188 Australian university undergraduate psychology students completed an online questionnaire following completion of an interprofessional first year program incorporating 17 health science disciplines. Path analysis indicated that psychology students' attitudes towards IPE are associated with both professional identification and practitioner orientation, fully mediated through the perceived relevance of IPE to future career and study plans. Stronger professional identification and practitioner orientation were associated with greater perceived relevance and more positive and less negative attitudes towards IPE. The model explained 62% of the variance in positive attitudes and 44% of the variance in negative attitudes. Placing a stronger emphasis on the generalizability of interprofessional skills taught may increase students' awareness of the relevance outside of the health context, reducing disengagement of students planning alternative careers.

Introduction

Interprofessional education (IPE) is seen as a necessary step in preparing a collaborative practice-ready health workforce better able to respond to the local health needs (World Health Organisation 2010), with increasing evidence of the effectiveness of IPE interventions (Reeves, Perrier, Goldman, Zwarenestein, 2013). Over the last two years, the importance of IPE and collaboration to the future of psychology within the health sector has been highlighted. Psychologists are in danger of being excluded from health care reform initiatives that are emphasising integrated patient care if they continue to work within silos (Cubic, Mance, Turgesen & Lammana, 2012; Rozensky 2011; 2012). Rozensky (2011) noted that future involvement in IPE and practice may necessitate financial, regulatory and philosophical changes for psychologists, including a reconcepualisation of 'clients' as 'patients'.

In particular the need for interprofessional collaboration between psychologists and psychiatrists has been highlighted (Lee, Schneider, Bellefontaine, Davidson, & Robertson, 2012). More than a third of psychologists and psychiatrists surveyed by Lee and colleagues reported limited knowledge of training, assessment and interventions of the other profession. While formalised opportunities were available for IPE and training through hospitals, universities and community organisations, the most common way that the psychologists and psychiatrists surveyed learned about the other discipline was through case consultation.

A further area of focus has been interprofessional collaboration within primary health care settings (Cubic et al., 2012; Winefield & Chur-Hansen, 2004). This focus within Australia followed the introduction of federal funding for clinical psychologists to work collaboratively with general practitioners (Winefield & Chur-Hansen, 2004). In addition to working interprofessionally with primary care health professionals, the need for

psychologists to collaborate with managers, accountants, politicians, and economists was highlighted. (Winefield & Chur-Hansen, 2004).

Despite the increased focus on the importance of interprofessional care for the field of psychology, psychology students have been largely absent from the literature on IPE. One possible reason for this is the structure of psychology training. In contrast to many other health disciplines where students graduate from their undergraduate degree equipped to practice, psychology students engage in a broad undergraduate curriculum with a research rather than practice focus, and require further education and/or supervision before being able to practice as a psychologist. Further there are a range of specialist areas within psychology (e.g. health, clinical, counselling, clinical neuropsychology, community, educational and developmental, forensic, organisational and sports psychology) and IPE may be of direct relevance to only the first four of these.

Psychology schools and departments are situated within a range of faculties (e.g., Arts, Humanities, Social Sciences) reflecting the diversity of research and careers associated with psychology. Further, within psychology schools some students are enrolled in double major degrees and are planning a career outside of the mainstream of psychology occupations. Students may perceive that IPE at the undergraduate level is of direct relevance only if planning a career involving direct client care within health settings.

In contrast to many other health professions, undergraduate psychology students do not engage in either specific client care skill training or work placements until they commence a Masters level qualification, limiting the opportunity for *in-situ* interprofessional training activities. This means that while postgraduate psychology students engaging in interprofessional placements may be placed with other postgraduate students (e.g., Howell, Whitman & Bundy, 2012; Wellmon, Gilin, Knaus & Inamn, 2012), they are more likely to be placed with undergraduate students in other disciplines (e.g., Priest, Roberts, Dent, Blincoe,

Lawton & Armstrong, 2008; Priest et al., 2011). The difficulties associated with having higher level clinical psychology students engaging in interprofessional placements with undergraduate students from other disciplines was highlighted by Priest et al. (2008).

In summary, the structure of psychology education in Australia does not align with most health professional degrees. This creates difficulties for the timing of IPE within the psychology curriculum. If IPE is incorporated in post-graduate training (e.g., clinical psychology masters degrees), postgraduate psychology students may be placed with undergraduate students from other disciplines. If instead, IPE is incorporated within the undergraduate psychology degree, it may not be seen as relevant to students pursuing careers outside of direct client care in health contexts.

To date, no research has examined whether undergraduate psychology students' views of IPE vary according to their planned career directions. Many interprofessional skills taught within a health context may be transferrable across occupations (e.g., teamwork; working with others from different backgrounds), however, if students do not see the relevance of IPE, this may have implications for student satisfaction and course retention.

The current study

The current research examines undergraduate psychology students' perceptions of IPE in relation to intended career directions. The context for this study is a first year health sciences interprofessional curriculum at an Australian university (see Brewer, 201l for the interprofessional capability framework within which the first year curriculum is situated), where students have learnt "with, from and about" (CAIPE 2002) each other's discipline. More than 2,300 students from 19 disciplines complete the first year interprofessional curriculum at this university each year (Brewer & Jones, 2013; Jones, Brewer & Davis, 2011) Surveying students at the beginning of the second year of undergraduate psychology degree

provides the opportunity for students to reflect on IPE 'as taught' rather than 'in principle'. This is important as previous research has suggested students' perceptions s of IPE may change after exposure. Pollard, Miers and Gilchrist (2005) reported 'second year scepticism' where students' positive attitudes in relation to IPE dropped between first and second year (with similar findings reported by Coster et al., 2008), followed by a further drop by the end of the third year (Pollard, Miers, Gilchrist & Sayers, 2006), suggesting that after exposure to IPE, students re-evaluate their perceptions of IPE.

Research Questions and Hypotheses

There are two research questions driving this research. The first research question is *"Do psychology students' attitudes towards IPE vary according to their intended career direction?"* It was hypothesised that professional identification and practitioner orientation would be positively correlated with the perceived relevance of IPE and positive attitudes towards IPE, and negatively correlated with negative attitudes towards IPE.

The second research question is *"Does the perceived relevance of IPE mediate the relationship between intended career direction and attitudes towards IPE?"* It was hypothesised that the relationship between intended career direction and attitudes towards IPE would be fully mediated by the perceived relevance of IPE to future study and career plans (see Figure 1).

<insert Figure 1 about here>

Method

Research Design

This research employed a correlational study utilising an online survey to measure students' planned careers and attitudes towards IPE. In addition to quantitative measures, one open ended question was included to enable students to provide further comment on IPE in relation to career goals.

Participants

The participants for this research were second year undergraduate psychology students at an Australian University enrolled in a first semester psychological science unit. The majority of students (161, 85.6%) was enrolled in a Bachelor of Psychology degree ('single degree'), with 27 students (14.4%) enrolled in a Bachelor of Science (Psychology) and Bachelor of Commerce (Human Research Management and Industrial Relations) ('double degree'). Of the 226 students enrolled in the unit at the start of semester, 188 students completed the survey, providing a completion rate of 83%. Reflecting the undergraduate psychology population, most participants were female (73.9%), domestic (96.3%), full-time (86.7%) students. Participants ranged in age between 18 and 61 years (M=20.97, SD=4.88). Two-thirds (66.5%) of participants planned to work with clients in health care settings in the future, 27.7% were unsure and 5.9% did not.

An a-priori power analysis indicated a minimum of X participants was required to meet the recommended criteria of 10 cases per parameter required for path analysis using structural equation modelling software (Kline, 2005). The sample size obtained meets this requirement.

Measures

Two online questionnaires were created and included the measures listed below. While the content of the surveys was identical, the ordering of career and interprofessional attitudes measures were counterbalanced in order to detect possible order effects.

Positive Attitudes toward IPE

The nine-item Interprofessional Learning Scale of the UWE Interprofessional Questionnaire (Pollard, Miers & Gilchrist, 2004) was used to measure positive attitudes toward IPE. Eight of the items indicate positive attitudes towards IPE (e.g., "Collaborative learning would be a positive learning experience for all health and social care students"). The one negative item is recoded The Likert-style five-point response scale ranges from (1) *strongly agree* to (5) *strongly disagree*. Previous research has demonstrated the scale is internally reliable (α =.84) and has acceptable test-retest reliability over a 1-2 week period (*r*=.86; Pollard et al., 2004). The concurrent validity has been established through a strong positive correlation (*r*=.84) with Parsell and Bligh's (1999) Readiness for Interprofessional Learning Scale (Pollard et al., 2004). In this study the scale had acceptable reliability (α=.82). Possible scale scores range from 9 to 45, with items recoded so that higher scores reflect higher levels of positive attitudes.

Negative attitudes towards IPE

Existing IPE measures were examined for items that explicitly measure negative attitudes towards IPE in early years of the undergraduate curriculum. Eight items were identified and included in the questionnaire. The Likert-style five-point response scale ranges from (1) *strongly agree* to (5) *strongly disagree.* Principal axis factoring of the eight items extracted one factor accounting for 42.15% of variance (see Table 1). The scale has good internal reliability (α=.84). Possible scale scores range from 8 to 40, with all items recoded so that higher scores reflect higher levels of negative attitudes.

Practitioner Orientation

The Scientist-Practitioner Inventory for Psychology (Leong & Zachar, 1991) is a 42-item inventory that measures scientist and practitioner interests in psychology. Participants are

asked to rate each item in terms of their level of interest in conducting the specified activities in their future careers. Only the 21 item practitioner scale is of interest in this research. An example item on the practitioner scale is "Conducting group psychotherapy sessions". The Likert-style five-point response scale ranges from (1) *very low interest* to (5) *very high interest*. Possible scale scores range from 21 to 105, with higher scores representing higher interest in practitioner activities. Previous research indicates the scale has good internal reliability (α = .88 to .94; Holmes & Beins, 2009; Leong & Zachar, 1991), with comparable findings found in this study (α=.90).

Identification as a Psychologist

The Professional Identity Scale (Adams, Hean, Sturgis & Macleod Clark, 2006) is a 9-item measure of the strength of professional identity. The measure comprises 6 positively (e.g., "I feel like I am a member of this profession") and 3 negatively (e.g., "I try to hide that I am studying to be part of this profession") worded items. Participants respond to each item on a 5 point Likert-style scale ranging from (1) *never* to (5) *very often*. Possible scores range of 9 to 45, with higher scores representing a more positive professional identity. Previous research indicates the scale is unidimensional and internally reliable (α=.79, Adams et al., 2006). In this study the measure had acceptable internal reliability (α=.79).

Perceived Relevance of IPE

No measure of the perceived relevance of IPE to future careers was able to be located in a search of the published academic literature. Four items were developed by the researchers. The Likert-style five-point response scale ranges from (1) *strongly agree* to (5) *strongly disagree*. Principal axis factoring of the four items extracted one factor accounting for 63.82% of variance (see Table 2). The scale has good internal reliability (α=.78). Possible

scale scores range from 4 to 20, with the first three items recoded so that higher scores reflect higher levels of perceived relevance.

Demographic variables

Single items measures of age, gender, degree, year of study, part-time/full-time status, international/domestic student and intention to work to work within health care settings in direct client care roles were included in the questionnaire.

IPE Comments

One open-ended question was placed at the end of the questionnaire: "Do you have any comments you would like to make about IPE in relation to your planned career?"

Procedure

Following approval from XXX University Human Research Ethics Committee, the two versions of the questionnaire were developed and hosted online. Questionnaires were 'sandwiched' between a participant information sheet and a debriefing page hosted on a university server, in line with best practise recommendations (Allen & Roberts, 2010). Students were recruited through a second year psychology participant pool. Upon consenting to participate, students were randomly assigned to the one of the two versions of the questionnaire. Students opting not to participate in this or other research were offered an alternative written activity. The questionnaires were available between March and June 2013.

At the end of the survey period questionnaire data for 201 participants was downloaded into SPSS (v. 20) for preliminary analysis. Ten cases were deleted as the survey was not completed and a further three cases deleted where the student was enrolled in a degree other than psychology, leaving 188 cases for analysis. Missing data was replaced using mean scores.

Results

Descriptive statistics for each of the scale measures are presented in Table 3. To address the first research question, a correlation matrix was produced (Table 4). As hypothesised, professional identity and practitioner orientation were significantly positively correlated with perceived relevance and positive attitudes toward IPE (all medium effect sizes). Professional identity was significantly negatively correlated with negative attitudes (small to medium effect size), but practitioner orientation was not.

<insert Table 3 about here>

<insert Table 4 about here>

To address the second research question, the hypothesised full mediation model was tested against a partial mediation model. This analysis was conducted using path analysis in LISREL v 8.2, to enable measurement error to be taken into account. The resulting models are presented in Figures 2 and 3, with fit indices for each model presented in Table 5.

<insert Figure 2 about here>

<insert Figure 3 about here>

<insert Table 5 about here>

The two models account for similar percentages of variance in attitudes towards IPE. Both models accounted for 62% of the variance in positive attitudes and more than 40% of the variance in negative attitudes to IPE (48% saturated model, 44% mediated model). Using Cohen's conventions, these are large effect sizes. Professional identification and practitioner orientation combined account for 21% of variance in the perceived relevance of IPE in the saturate model and 20% in the mediated model (medium effect sizes). An examination of the

fit indices indicates that the full mediation model provides a better fit to the data than the saturated partial mediation model, and as the more parsimonious model should be preferred.

Qualitative findings

Comments by single and double degree psychology students in response to the open ended question were analysed separately using content analysis. Quotes are presented in italics and minor typographical errors have been corrected to increase readability.

Single degree students

Twenty nine students enrolled in a Bachelor of Psychology single degree provided comments about IPE. The large majority of comments were positive, focusing on interprofessional care as optimal client care; *"A united, inter-professional plan of health presents the best opportunity to deliver the best client care";* and an improvement over current practices: *"Interprofessional education is important in this day and age as it allows different faculties of health science personnel to work together which will hopefully allow to create a better health care system for the public"*. Students highlighted the need for health professionals to communicate and work together: *"OT's, Psychologists, Psychiatrists may all be working with the same patient at the same time, meaning they need to know how to effectively communicate with each other, in order to manage and give their patient the best care possible"*.

The relevance of IPE to students planning to be psychologists was highlighted; *"interprofessional education is extremely important in relation to Psychology"* and *"As a Psychologist it is very important to have an interpersonal relationship with other profession. That will help you having information about your clients"*; along with the relevance of the material covered *"it would be helpful as a psychologist to have basic knowledge of all health science information"*. Some students clearly stated their intention to engage in

interprofessional practice: *"This is an excellent way in how to train students in interprofessional relationships. I hope to work in an interprofessional team"* and *"of up most importance in my planned career (as a psychologist)"*

IPE was seen to provide the training required to practice within interprofessional health teams. IPE exposed students to differing disciplines; *"I think interprofessional education is a great way to get undergraduate students used to the idea of working alongside all kinds of health professionals"*; broadening their understanding of different paradigms; *"It made me think about things that i don't think I would have, in particular: everyone having a 'world view'- I believe this open mindedness helps people become better professionals"*. IPE also contributed to an understanding of the workplace; *"give us a sense of what it would be like in the real workplace"*; and developing the interpersonal skills necessary for interprofessional care: *"It promotes team work and equality as well as a holistic view on health care"*.

The timing of IPE was questioned by some students, who felt that first year students had insufficient discipline specific knowledge to fully engage in IPE*: "I felt in first year people did not know much about their degree. Or at least not enough that it really felt like working on an interprofessional team. For example, after only a few weeks of class I was unable to offer a "psychology-based perspective" about things"* and *"we end up relying on our pre-conceived ideas/stereotypes of what other discipline do (including own own) and try to imagine what we would be doing/discussing with other health care professionals. I think some essential steps are being missed, which really impacts on whether the initial aims are met."*

Some students recommend IPE be moved to later years; *"would be more useful in later years, when students actually have some sort of knowledge about their own field to bring to the table. Many times, we felt as though we didn't have enough knowledge, or practical skills to*

be able to effectively bring out the strengths of each discipline when working together" and "*I think Interprofessional Education should be learned later in the degree, when students' roles from different disciplines will be more defined*". Another student commented*: "True interprofessional relationship education I imagine happens as I progress closer towards having a career."* In direct contrast, one student commented on the appropriateness of IPE in first year, questioning the practicality in later years: *"Interprofessional education was useful during 1st year as there were a number of core subjects common to several streams. I do not know how effective it can be in later years due to the specialised nature of the studies."*

Some students queried the relevance of IPE to future careers; *"whether it is relevant or not is highly influenced by what branch of psychology i choose to go into";* with one noting the focus on clinical psychology to the exclusion of other types of psychology careers: *"We haven't talked much about anything other than being a clinical psychologist, so it is hard to tell whether the interprofessional education would be helpful."* Similarly, one student commented on the health focus of IPE: *"Psychologists have to work with people outside health, perhaps more interaction with other faculties would be more productive."* Another student noted the relevance of IPE was dependent upon the disciplines involved: *"It depends on what interprofessions you work with. Some are very relevant, others can just waste time."* However, others saw value in IPE for all future careers: *"I think it's important to have a wide knowledge regarding other health disciplines regardless of your chosen profession"*

Some students expressed general dissatisfaction with IPE: "*I feel there are better uses of my educational time, that could make me more prepared for my career than interprofessional education",* or the way it was taught*: "I think the interprofessional classes were pointless. I didn't learn anything useful about the other professions or how they work. It wasn't really about working as part of an interprofessional team because we all did the same work. If there was a way we could all "consult" each other*

from the differing points of view of our courses, it would be a more useful way of teaching this rather than having everyone on the group doing the same thing."

Double degree students

Ten students enrolled in a 'double degree' provided comments about IPE. Three of the students provided comments that supported IPE, with one focusing on IPE within the heath context; *"It is important so the client receives the best care and treatment";* and the other two on the benefits of IPE more generally (e.g., *"i just think that working with different professionals will certainly benefit me in my future and current studies"*). One further student indicated partial support for a 'watered down' IPE: *"I think it shold be done minimally as yes there are some benefits, which are great, and it will reflect real life where we will have to work with others. HOWEVER it is also important to recognise that we will learn most from our peers that understand our profession so that we can share information relevant of our chosen subject. Don't go overboard with a practice just because it's new and sounds good."*

The competing paradigms of commerce and psychology were noted: *"Business School and Health Sciences do not mix effectively. Very different approaches and I feel lost sometimes in the middle"* Other students indicated that IPE in health sciences should be optional; *"as i study both psychology and commerce i think Interprofessional education should be our own choice depending on whether or not we would prefer to follow a career path";* was not congruent with current career plans; *"As i plan on doing HR i don't think interprofessional education is relevant to my career unless i become a psychologist";* and that IPE within other disciplinary/occupational groupings may be preferred**:** *"I like to mix with people from all different professions, and I feel that I do this the most in my Commerce class, with people doing a wide variety of majors".*

Two students commented that it was not IPE itself that was the problem, but the relevance of what was taught within the IPE units: *"As long as the education we receive is relevant it can be beneficial, to date this hasn't happened and has led to me having a negative view on interprofessional education"* and *"It is not a waste of time to learn with other professions in Health Science, but the information covered in the units should be more relevant and interesting which would encourage better relationships in future careers"*.

Discussion

The aim of this research was to examine psychology students' attitudes towards IPE in relation to their intended career directions. The results indicate that psychology students' attitudes towards IPE are associated with both professional identification and practitioner orientation, mediated through the perceived relevance of IPE to their future career and study plans. Stronger professional identification and practitioner orientation were associated with greater perceived relevance and more positive and less negative attitudes towards IPE.

Scores on the two measures of career direction; professional identity and practitioner orientation; were both above the midpoint of the scales, indicating positive professional identification and a practitioner orientation. This is consistent with previous research reporting strong professional indication in first year students across occupational grouping (Adams et al., 2006; Coster et al., 2008; Hind et al., 2003). The two measures were moderately correlated ($r=.45$) suggesting that a practitioner orientation is a central component of professional psychology identification.

Scores on the perceived relevance measure were also above the mid-point indicating that on average students agreed that IPE was relevant to them. Both measures of intended career direction were positively associated with perceived relevance of IPE, indicating that practitioner orientation and professional identification are key predictors of the perceived

relevance of IPE to future studies and careers. However, combined they explain only 20% of the variance in perceived relevance of IPE, suggesting other factors are also important in determining relevance. Comments provided in response to the open-ended question suggest that these factors might include the disciplines involved, the content of the material taught, and not knowing enough psychology to be able to meaningfully contribute.

Students enter health courses in universities with stereotyped views of different health professionals (Tunstall-Pedoe, Rink & Hilton, 2013), with strength of professional identity positively correlated with 'autostereotypes' (Hird et al., 2003). In the absence of specific knowledge about the role of psychologists and how this is differentiated from other professions, students may resort to applying and perpetuating stereotypes. This provides a strong argument for delaying IPE until after the first year of study, or providing vertical integration of IPE across years.

Perceived relevance was strongly associated with both positive attitudes and negative attitudes. Scores were above the mid-point of the positive attitudes scale and below the midpoint on the negative attitudes scale, indicating than on average students held positive attitudes towards IPE. This was also reflected in the qualitative comments, with the majority of comments from single degree psychology students supporting IPE. Students recognised the need for health professionals to communicate and work together IPE was perceived as relevant to working as a psychologist, providing exposure to different disciplines, contributing to an understanding of the workplace and developing the interpersonal skills necessary for interprofessional care.

The mediation model tested has strong explanatory power and increases our understanding of why some psychology students do not embrace IPE. Students with lower professional identification and less interest in practitioner activities perceive less relevance

for IPE and hold stronger negative attitudes and weaker positive attitudes towards IPE. Comments from 'double 'degree' students referred to the tension between health sciences and commerce, the preference for interprofessional activities with students beyond health science and the perceived limited relevance of health-focused IPE for careers in human resource management.

If attitudes toward IPE are largely driven by the perceived relevance of IPE, what can be done to change the attitudes of those students who do not see the relevance of IPE to their future study or career aspirations? In a large IPE program catering for seventeen disciplines it is not logistically feasible to specifically cater for individual sub-disciplines through, for example, providing relevant scenarios and examples for each. However, interprofessional collaboration, including the ability to effectively work with and learn from professionals in other disciplines, is highly valued in all work places, not just within the health context. One option may be to have teaching staff focus on the relevance of interprofessional collaboration in all workplaces, emphasising the generalizability of the skills learned in the interprofessional first year to other contexts. This may act to increase the perceived relevance of IPE and further engage students across disciplines who do not currently envisage a career in health settings.

Alternatively, it could be argued that IPE taught within a health context is relevant only to those students planning a career as a health practitioner, and students planning alternative careers may be better served by an alternative. This may be particularly the case for students completing 'double degrees', who we risk disenfranchising if we cannot actively engage them in their first year of study.

The findings from this research provide clear evidence of the mediating role of perceived relevance in the relationship between intended career direction and attitudes toward

IPE. Strengths of the study include the high response rate and statistical analysis that accounts for measurement error. However, one limitation of the research is the use of one-point-in-time data to examine causal pathways. Future longitudinal research is required to track changes in the key variables over time. In order to determine the generalizability of the findings beyond psychology students, future research is required that applies the model to students from a range of disciplines.

Conclusion

In summary, in this paper we have presented a model of the relationship between intended career direction and attitudes towards IPE, proposing the perceived relevance of IPE to future study and career plans as a mediator. The model was supported in a sample of undergraduate students, and was able to successfully predict both positive and negative attitudes. It is recommended that teaching staff place a stronger emphasis on the generalizability of the interprofessional skills taught, to increase students' awareness of the relevance outside of the health context.

Declaration of Interest: The authors report no declarations of interest.

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Table 1

Items and Factor Loadings for the Negative Attitudes Towards Interprofessional Education Scale (N= 188)

Item Source	Item	Factor loading
Morison & Jenkins (2007)	Learning with other healthcare professionals is unnecessary before qualification	.652
Morison & Jenkins (2007)	Learning with other healthcare professionals should only occur where there is direct application to clinical practice	.637
Morison & Jenkins (2007)	My own observation has enabled me to learn as much as I need to know about the roles and responsibilities of other healthcare professionals.	.358
Morison & Jenkins (2007)	Team working skills should be learned only after qualification	.519
Morison & Jenkins (2007)	I prefer to learn subjects with students from my own profession.	.641
Parsell & Bligh (1999)	I don't want to waste my time learning with other Faculty of Health students*	.806
Parsell & Bligh (1999)	It is not necessary for Faculty of Health undergraduate students to learn together	.847
Parsell & Bligh (1999)	Problem-solving skills can only be learned with other students in my discipline	.606

Note: *Items modified to reflect specific learning context.

Table 2

Items and Factor Loadings for the Perceived Relevance of Interprofessional Education Scale

(N= 188)

Item	Factor Loading
Interprofessional education is relevant to studies in my discipline	
Interprofessional education is relevant to my chosen career path	
Interprofessional education will make me more competitive for the types of jobs I am interested in	
I can't see how I will be able to apply what I have learned about interprofessional education in my future career	

Table 3

Mean, Standard Deviation and Range of scores on Scale Measures (N= 188)

Measure	Minimum	Maximum	Mean (SD)
Professional Identity	24	45	36.29(4.40)
Practitioner	42	103	75.62(12.42)
Perceived Relevance	7	20	15.72 (2.79)
Positive Attitudes	13	44	33.83(5.08)
Negative Attitudes	8	35	18.46(5.07)

Table 4

Correlation Matrix of Scale Variables (N= 188)

	Professional Identity	Practitioner	Perceived Relevance	Positive Attitudes	Negative Attitudes
Professional Identity	1				
Practitioner	.45**	1			
Perceived Relevance	.33**	.30**	1		
Positive Attitudes	.30**	.31**	.60**	1	
Negative Attitudes	-.18*	-.11	-.51**	-.52**	1

Note: *p<.05, **p<.01

Table 5

Summary of Model Fit Indices for Saturated and Fully Mediated Models

Goodness of fit indices	Recommended Cut Offs (Kline, 2005)	Saturated Model df=1	Mediated Model df=5
Normed χ^2	< or = 3	6.60	2.23
CFI	> or = 0.9	0.98	0.97
NNFI	> or = 0.9	0.79	0.95
SRMR	<0.10	0.02	0.04
RMSEA	<0.08	0.18	0.08
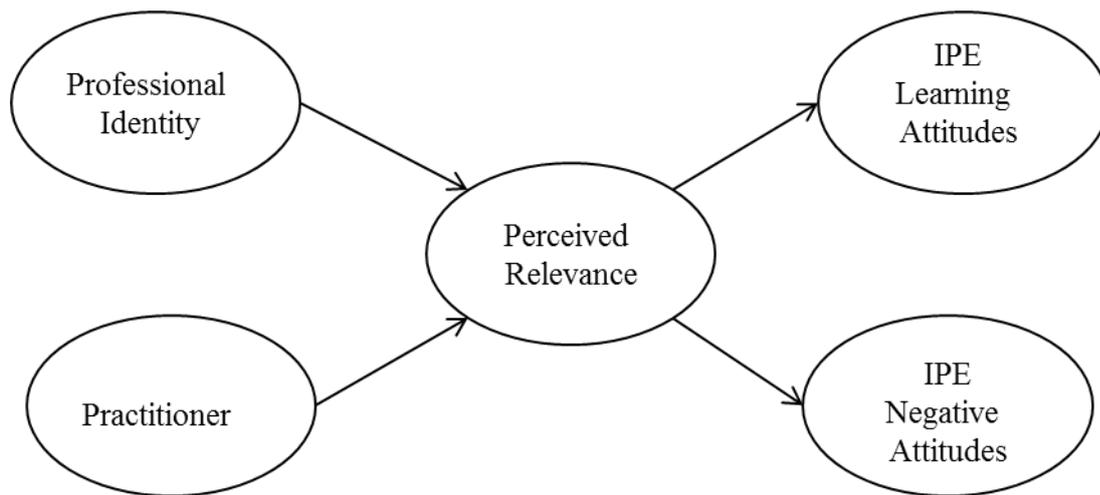
Figure 1. Proposed fully mediated model of the relationship between intended career direction and attitudes towards IPE.
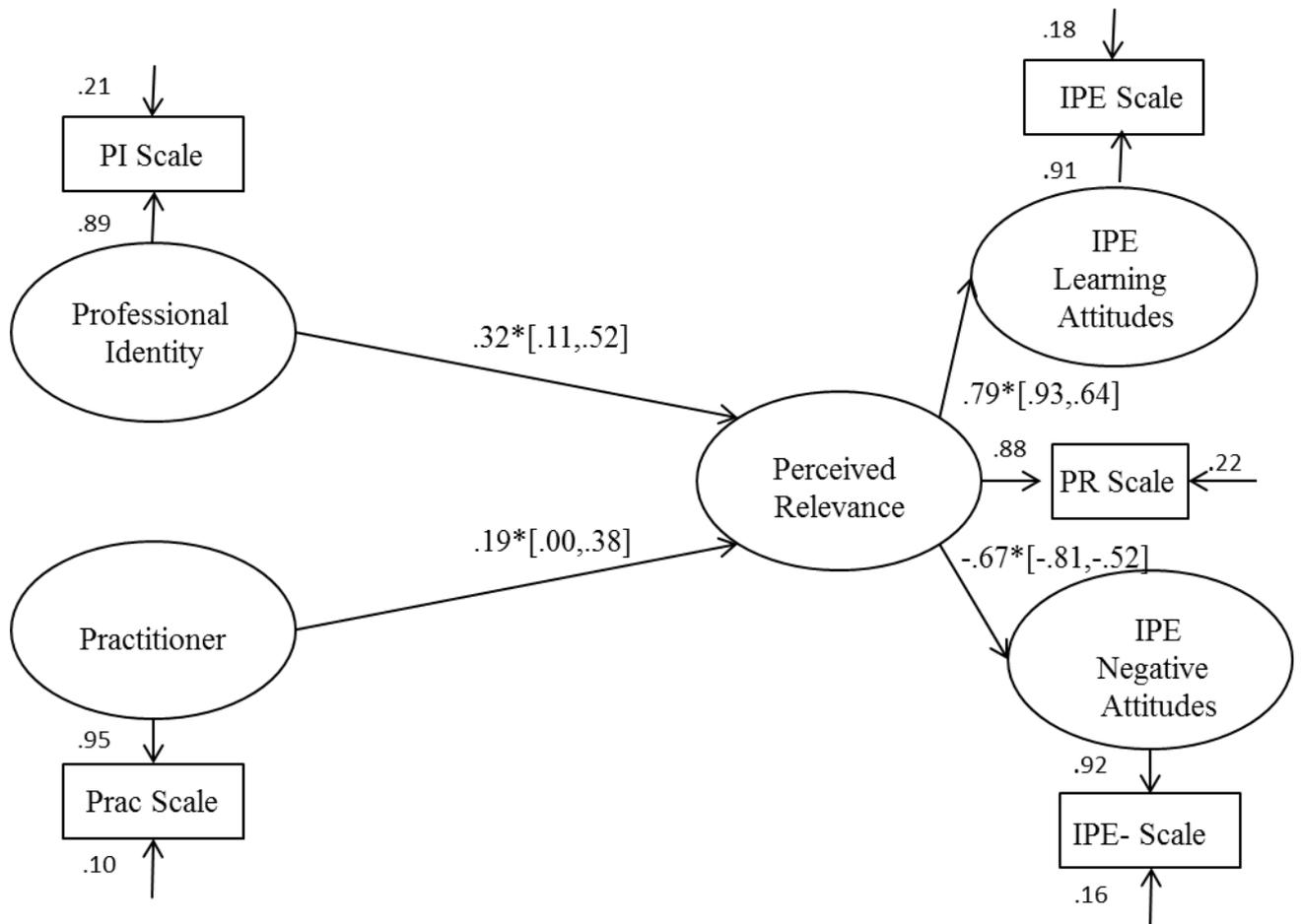
Figure 2. Model of the relationship between intended career direction and attitudes towards IPE testing full mediation.
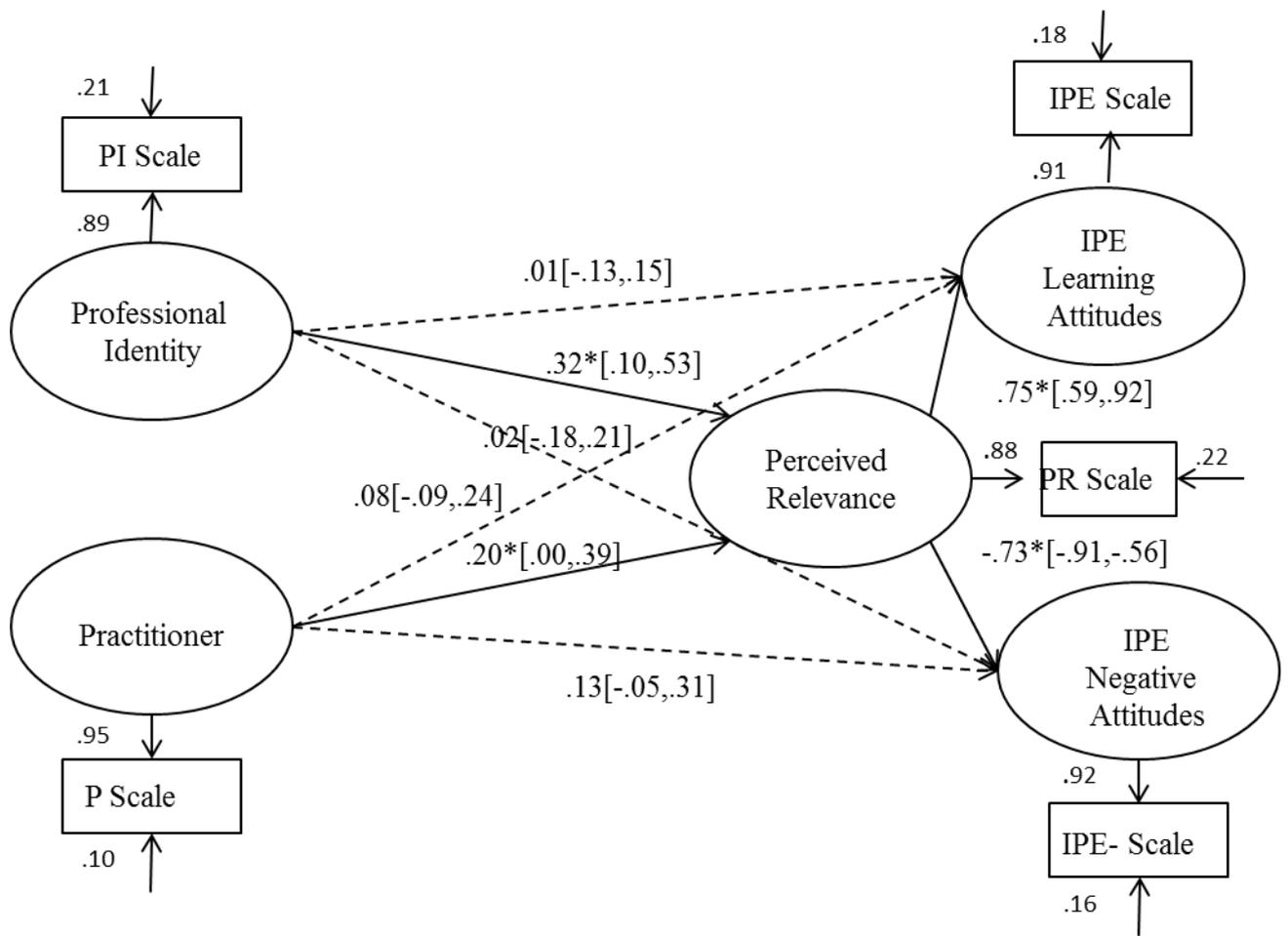
Figure 3. Saturated model of the relationship between intended career direction and attitudes towards IPE testing partial mediation.