

Doctoral students' professional identity: Psychosocial antecedents of those who work in practice

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Abstract

The main goal for doctoral student is to acquire the identity of a researcher. However, doctoral student also performs other professional roles, such as a teacher or practitioner. The purpose of this paper is to reveal the psychological and social factors that are important for the practitioner's role identity of doctoral students. The sample consisted of 494 doctoral students from 22 higher education institutions in Lithuania. Internet survey was conducted. The analysis of structural equation modelling revealed that perceived support of family and friends, conscientiousness and lower neuroticism are important for practitioner's role identity. In addition, if a doctoral student has a tendency to experience negative emotions (sadness, anger, guilt, etc.), a greater perceived support from employer helps to internalise the professional role of a practitioner. This study has practical implications for doctoral students, organisers of doctoral programmes, career counsellors, employers and universities.

Keywords: Professional identity, doctoral student, practitioner, role identity.

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1. Introduction

The purpose of doctoral programmes is to prepare students for research careers. Therefore, the main goal for doctoral student is to acquire the identity of a researcher (Austin & McDaniels, 2006; Grant-Davie, Matheson & Stephens, 2017; Lamar & Helm, 2017; Mantai, 2017; Smith & Hatmaker, 2014). It is a unique self-concept that includes research self-efficacy and interest (Lamar & Helm, 2017). Mantai (2017) described that becoming a researcher is one of the roads travelled in the emotional, social and intellectual process of Ph.D. journeys. However, doctoral students perform many roles, and each role is associated with different contexts, responsibilities, values and expectations. The multiplicity of identity in doctoral journey was highlighted by many authors (e.g., Austin & McDaniels, 2006; Bereznicki, Sutherland-Smith & Horwood, 2014; Colbeck, 2008; De Simone, 2001; Jazvac-Martek, 2009; Lovitts, 2005; Rockinson-Szapkiw, Spaulding & Lunde, 2017; Svyantek, Kajfez & McNair, 2015; Whitchurch, 2010). Teacher, researcher and practitioner (or service provider for community, such as a psychologist) are the main professional roles of doctoral students.

Professional identity is understood as psychosocial process. From one (person's) side, professional identity is seen as a relatively stable set of traits, attitudes, values, motives, experiences and relationships which allows people to define their professional role (Dobrow & Higgins, 2005; Ibarra, Kilduff & Tsai, 2005). From another side, the professional identity includes the knowledge of person's membership as well as evaluation and feelings in regard to it (Tajfel, 1982). Hence, a doctoral student's professional identity is a complex multidimensional construct that expresses identity with professional roles performed in an academic environment (Austin & McDaniels, 2006; Colbeck, 2008; Lovitts, 2005; Rockinson-Szapkiw et al., 2017).

Studies show that psychological factors have an impact on the formation of a doctoral student's professional identity. Psychological factors are probably the most important ones, because peculiarities of personality remain relatively stable (Guseva, Dombrovskis & Kokina, 2009). Personality traits are identified as important factors in various daily situations and in working life, because they determine personal behaviour (Mount, Barrick, Scullen & Rounols, 2005). Research, on relationship between identity and personality traits, aims to reveal how identity depends on the stable inner personal characteristics (Hirschi, 2012). Thinking styles are also important psychological factors that play a part in the doctoral student's professional identity. Regardless of a specific theory, the term 'style' is associated with the usual or preferred way to do something (Cools & Van den Broeck, 2007). Thinking style is defined in psychology as a particular way for which a person prefers to process information (Zhang & Fan, 2007) or an acceptable (convenient) way of using the available abilities (Zhang & Sternberg, 2005). In other words, this is a characteristic way for a person to think, perceive stimuli and use it (Cools & Van den Broeck, 2007).

Social factors also contribute to the formation of doctoral students' professional identity. Because of the fact that many professionals do not work completely independently, social relations, cooperation, support, and encouragement are important factors for professional identity formation (Akerlind & McAlpine, 2015). Social support from a variety of sources (research supervisor, colleagues, employer, family and important others) contributes to the professional growth, confidence and success. Number of studies emphasised the magnitude of social relations and support for professional identity formation of doctoral students (Baker & Lattuca, 2010; Chapman et al., 2009; Ghosh & Githens, 2009; Martinsuo & Turkulainen, 2011; Sweitzer, 2009). The most important sources of social support are: scientific supervisor (Baker & Lattuca, 2010; Ghosh & Githens, 2009; Martinsuo & Turkulainen, 2011; Sweitzer, 2009) and scientific community or faculty support (Carter, 2006; Chapman, Wiessner & Morton, 2009; Ghosh & Githens, 2009; Ibarra et al., 2005; Kim & Karau, 2009; Lamar & Helm, 2017; Smith & Hatmaker, 2014). External support may also play an important role in the formation of doctoral students' professional identity. For example, supportive spouse and friends (Maher, Ford & Thompson, 2004) or supportive employer for those who work in practice (Malfroy & Yates, 2003) provides the confidence and space to differentiate, develop and intersect multiple

identities, a process that allows for successful negotiation and integration of identities (Rockinson-Szapkiw et al., 2017).

Some doctoral students come from practice and start their Ph.D. studies as being practitioners, and some of them begin to work in practice during their doctoral journey. One can argue that some people enter doctoral studies with a desire to realise themselves, while others come from practice to gain more competencies or a scientific degree. However, all this matters for the formation and development of doctoral students' professional identity. One can assume that professional identity is most affected if the doctoral student is working outside the university in his professional field. In this way, a person has already formed a certain professional identity (Baker & Lattuca, 2010), which is based on work experience, expectations, skills and relationships. However, Rayner, Lord and Parr (2015) highlighted that the progression from practitioner to researcher is not simple, rather, it is fluid and complex relationship between those two identities. The shift in identity is a difficult transition (Allen, Park Rogers & Borowski, 2016; Dailey, Harris & Plough, 2016), and obtaining a doctoral degree does not automatically develop the desired professional identity (Schulze, 2015). Klocko, Marshall and Davidson (2015) conducted research of practitioner-scholar transformation of doctoral candidates. The authors have found that the essential part in this process is supporting practitioner students as they transform into scholars. Furthermore, the community of practice (Allen et al., 2016; Coffman, Putman & Adkisson, 2016) facilitates the process of students' transformation from practitioners into scholars. To sum up, the assumption is made that employer support is important for doctoral students' professional identity, in particular, for identification with professional role of the practitioner. Moreover, it is assumed that the practitioner's role identity of doctoral students can be explained by the person's internal (psychological) and external (social) factors and by the interactions between them. Thus, the aim of this study is to reveal the psychological and social factors that are important for the practitioner's role identity of doctoral students.

2. Method

2.1. Participants

The sample consisted of 494 doctoral students from 22 higher education institutions in Lithuania. Of these total doctoral students, 328 were women (66%) and 166 were men (34%). The age of the participants varied from 24 to 56, the average age—30.54 years. Participants were from various fields of science (excluding Arts): social sciences (34%), biomedical sciences (19.6%), technological sciences (15.8%), physical sciences (15.8%), humanities (10.7%) and agriculture (4%). The participants were from 45 different doctoral programmes. Most of the respondents (92.3%) were full-time students. Distribution by the year in doctoral studies: first year—24.3%, second year—22.9%, third year—23.9%, fourth year—23.9%, and 5.1% were those who have already finished their studies, but have not defended their thesis yet. Also, 290 (58.7%) doctoral students indicated that they are working outside the university, and 251 (86.6%) of them are working in their professional field, 34 (11.7%) are working in another field and 5 (1.7%) did not specify.

2.2. Instruments

Doctoral students' professional identity questionnaire (Kovalcikiene & Buksnyte-Marmiene, 2013) measures how strongly the identity of certain professional role is expressed: teacher's professional role identity (Cronbach alpha—0.858), researcher's professional role identity (Cronbach alpha—0.799) and practitioner's professional role identity (Cronbach alpha—0.777). In this study, the focus is on the *Practitioner's professional role identity scale* of this instrument that measures how strongly the identity of practitioner's professional role is expressed.

Thinking styles inventory (Sternberg & Wagner, 1992)—short version (65 items) was used to measure 13 thinking styles of doctoral students. The styles are: legislative (Cronbach alpha—0.772),

executive (Cronbach alpha—0.745), judicial (Cronbach alpha—0.779), hierarchical (Cronbach alpha—0.750), oligarchic (Cronbach alpha—0.754), monarchic (Cronbach alpha—0.737), anarchic (Cronbach alpha—0.552), global (Cronbach alpha—0.578), local (Cronbach alpha—0.665), external (Cronbach alpha—0.837), internal (Cronbach alpha—0.706), liberal (Cronbach alpha—0.867) and conservative (Cronbach alpha—0.872).

Big Five inventory (Benet-Martinez & John, 1998; John, Donahue & Kentle, 1991; John, Naumann & Soto, 2008) was used to measure the doctoral students' personality traits. The traits are: extraversion (Cronbach alpha—0.796), agreeableness (Cronbach alpha—0.690), conscientiousness (Cronbach alpha—0.782), neuroticism (Cronbach alpha—0.836) and openness to experience (Cronbach alpha—0.786).

Social support questionnaire (Kovalcikiene, 2013) was used to measure subjectively perceived social support of doctoral students from various sources. The sources are: scientific supervisor (Cronbach alpha—0.916), colleagues and other students (Cronbach alpha—0.820), family and friends (Cronbach alpha—0.777) and employer (Cronbach alpha—0.968).

2.3. Data analysis

The SPSS (version 22.0) and Amos version (22.0) were used for the statistical analysis of empirical data. In order to answer a research question, several parametric statistical criteria were used: one-way ANOVA, multiple linear regression and structural equation modelling (SEM).

3. Results

The results indicated that practitioner's professional role identity ($M = 4.08$, $SD = 0.56$) of doctoral students is expressed the most (ranging from 1 to 5) compared with the teachers' professional role identity ($M = 3.75$, $SD = 0.72$) and researcher's professional role identity ($M = 4.06$, $SD = 0.59$). In order to specify the relations of doctoral students' socio-demographic characteristics to the differences in professional identity expression of practitioner's professional role, the ANOVA was conducted. The analysis revealed that the practitioner's professional role identity is higher in the oldest group (33–56) compared with the older ones (30–32) ($p < 0.05$). The analysis showed that doctoral students who do not work outside the university have a higher researcher's professional role identity than employed students ($p < 0.05$). For those students who are working outside the university, the practitioner's professional role identity is expressed higher in comparison with unemployed students ($p < 0.001$). The results also suggest that the practitioner's professional role identity is higher for those who work in a professional field in comparison with those who work in another (non-professional) area ($p < 0.001$).

3.1. The importance of psychological and social factors for the practitioner's role identity

The results of the study revealed that certain psychological and social factors have a value for doctoral students' identification with practitioner's professional role. Characteristics of multiple linear regression revealed that thinking styles and personality traits jointly explained 20% of practitioner's professional role identity. For the practitioner's professional role identity, the following thinking styles have the significant predictive value: legislative ($\beta = 0.270$, $p < 0.01$), hierarchical ($\beta = 0.104$, $p < 0.05$), external ($\beta = 0.121$, $p < 0.01$) as well as personality traits: conscientiousness ($\beta = 0.230$, $p < 0.01$) and lower neuroticism ($\beta = -0.160$, $p < 0.01$).

Regression analysis of social factors indicated that social support sources outside the university facilitate the identification with practitioner's professional role of doctoral students. The results revealed that perceived support from an employer ($\beta = 0.253$, $p < 0.01$) as well as perceived support from family and friends ($\beta = 0.107$, $p < 0.05$) predict a more expressed practitioner's professional role

identity. Regression characteristics revealed that social support explained just 9.4% of the practitioner's professional role identity variance.

3.2. Modelling the interaction of factors that can explain the practitioner's role identity of doctoral students

In order to determine the hypothetical causal relationships between the variables, an SEM was conducted. Two structural equation models (for those who work in practice and who don't) were run in order to evaluate the importance of psychological and social factors for the practitioner's role identity of doctoral students. Both models corresponded well goodness of fit statistics and indexes. The analysis revealed that for those who are working outside the university, perceived support of family and friends, conscientiousness and lower neuroticism are important for practitioner's professional role identity (see Figure 1).

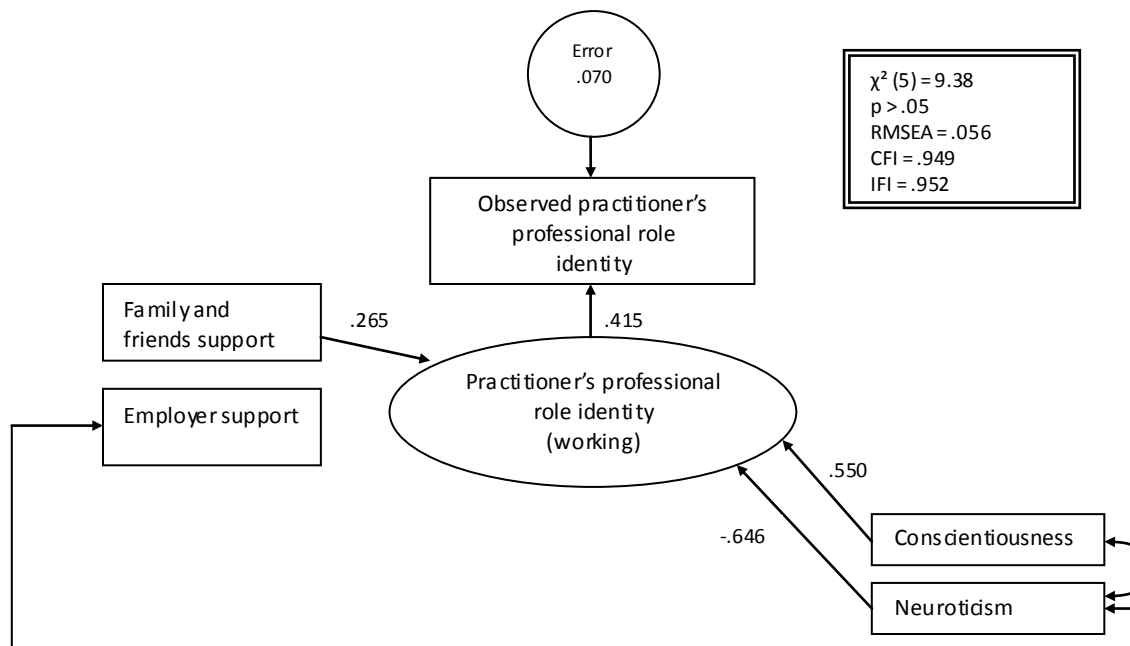


Figure 1. Model of hypothetical causal relationships for practitioner's role identity of those who work in practice

Notes: —→ statistically significant relation ($p < 0.05$); ↔ correlation; standardised regression weights are indicated; inter-correlations of independent variables are considered.

In addition, neuroticism is important for the practitioner's professional role identity through significant correlation with a subjectively perceived support from the employer (see Table 1). This suggests that if a doctoral student has a tendency to experience negative emotions (sadness, anger, guilt, etc.), a greater perceived support from the employer helps him or her to accept and internalise the professional role of a practitioner.

Table 1. Inter-correlations of independent variables (model of those who are working in practice)

| Inter-correlations of independent variables | | | Correlation coefficient | Sig. |
|---|---|--------------------|-------------------------|------------|
| Neuroticism | ↔ | Employer's support | -0.120 | $p < 0.05$ |
| Conscientiousness | ↔ | Neuroticism | 0.295 | $p < 0.01$ |

For those doctoral students who are not working outside the university, the practitioner's role identity of doctoral students predicts a more expressed external and legislative thinking styles and personality trait of conscientiousness. The model is presented in Figure 2. Meanwhile, a higher perceived support from family and friends, more expressed hierarchical thinking style and less expressed neuroticism indirectly have an effect on the practitioner's role identity (correlations of independent variables are presented in Table 2). These factors are important and necessary in the model, as their elimination adversely affects the model's compatibility with data.

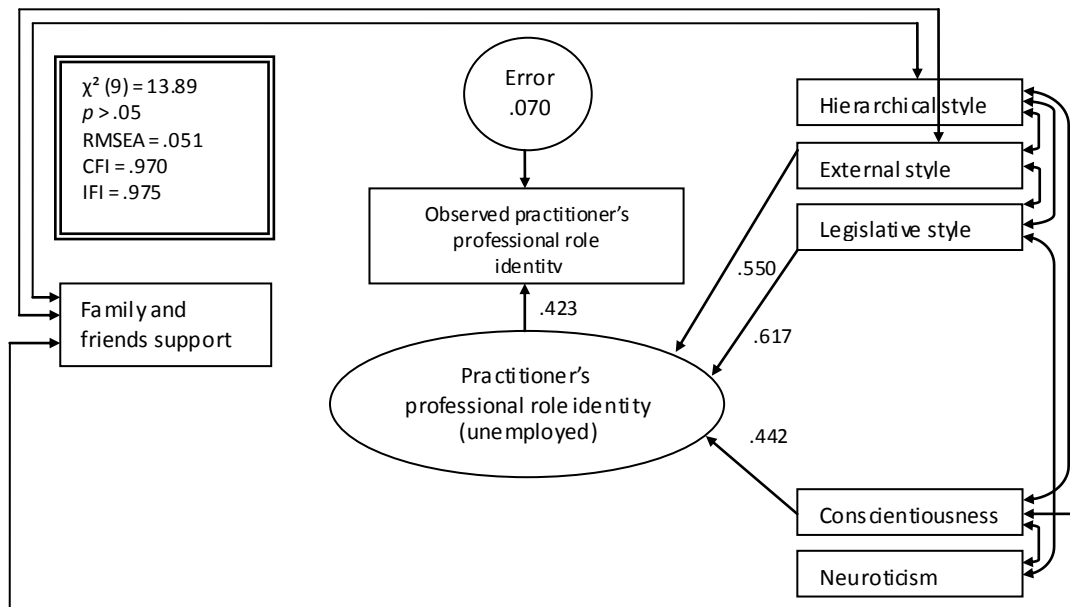


Figure 2. Model of hypothetical causal relationships for practitioner's role identity of those who do not work in practice

Notes: → statistically significant relation ($p < 0.05$); ↔ correlation; standardised regression weights are indicated; inter-correlations of independent variables are considered.

Table 2. Inter-correlations of independent variables (model of those who are not working in practice)

| Inter-correlations of independent variables | | | Correlation coefficient | Sig. |
|---|---|-----------------------------|-------------------------|------------|
| Hierarchical thinking style | ↔ | Family and friends support | 0.248 | $p < 0.01$ |
| Legislative thinking style | ↔ | Hierarchical thinking style | 0.233 | $p < 0.01$ |
| Legislative thinking style | ↔ | Neuroticism | -0.149 | $p < 0.05$ |
| Conscientiousness | ↔ | Family and friends support | 0.149 | $p < 0.05$ |
| Conscientiousness | ↔ | Hierarchical thinking style | 0.472 | $p < 0.01$ |
| Conscientiousness | ↔ | Neuroticism | -0.148 | $p < 0.05$ |
| External thinking style | ↔ | Family and friends support | 0.295 | $p < 0.01$ |
| External thinking style | ↔ | Hierarchical thinking style | 0.185 | $p < 0.01$ |
| External thinking style | ↔ | Legislative thinking style | 0.180 | $p < 0.01$ |

Summarising the results of the study, the personality traits (conscientiousness and neuroticism), thinking styles (hierarchical, legislative or external) and social support (from employer as well as from family and friends) are the antecedents of the practitioner's role identity of doctoral students. The complex (higher order) analysis is important, because it allows to investigate the hypothetical causal relationships between the variables.

4. Discussion and Conclusions

The research revealed the importance of analysing doctoral students' identification with different (separate) professional roles: researcher, teacher and practitioner. These research findings undoubtedly contribute to the works of scientists from other countries (e.g., Austin & McDaniels, 2006; Colbeck, 2008; De Simone, 2001; Jazvac-Martek, 2009; Lovitts, 2005; Whitchurch, 2010), who drew attention to the multiplicity of identity in doctoral education and challenges faced by doctoral students on these multiple identities. Doctoral students perform many professional roles, each of which is associated with different contexts and relationships, with different responsibilities, values and expectations.

Highly expressed researcher's role identity corresponds to the purpose of doctoral education—to develop scholars (or researchers). This study revealed that practitioner's role identity of doctoral students was expressed the most. One possible interpretation of these results might be deduced and emphasised on demand of scientists in business or private sector. Nowadays, the business-science partnership, which is a prerequisite for country's progress, innovation, competitiveness and prosperity, is increasingly being promoted. Another possible reason is the higher reward expected in practice. If the competences gained do not guarantee the necessary income level, the individual's incentive to choose a certain field of employment is shrinking. In Lithuania, the career of a scientist (researcher) is not financially attractive.

A doctoral student who has a practitioner's role identity realises that he has a tendency for practical work, knows the competences necessary to work in practice, is proud to be engaged in a professional practice, is accepted and appreciated in the community of practitioners, feels the meaning and realises oneself in practical work. The results of the study revealed that identification with practitioner's professional role is related with the perceived support from family and friends as well as perceived employer's support. The importance of support from employer, family and friends in doctoral journey was also highlighted by other researchers (e.g., Maher et al., 2004; Malfroy & Yates, 2003; Sweitzer, 2009).

The analysis of employed and unemployed in practical work doctoral students showed that for those who work in practice, perceived family and friends support directly improves the identity with practitioner's professional role. While the employer's perceived support has a value through the trait neuroticism. These results show that it is important to feel the support of the employer if the doctoral student tends to experience negative feelings, guilty, mournfulness, etc. It is interesting that thinking styles (legislative, external) provide higher identity with practitioner's professional role only in the case of unemployed doctoral students, and the importance of personality traits (conscientiousness, neuroticism) has become more prominent for those who work in practice. It can be reasoned that people who like to create and communicate with people have a tendency for practical work, because they want and, if necessary, can apply their knowledge in practical work to adopt the standards or values of professional ethics, etc. Meanwhile, doctoral students who work in practice have already formed the identity of practitioner, as they are competent in their practical work as well as characterised by regularity, commitment, goal orientation and similar characteristics. Also, for those employed doctoral students, who feel anxious and hostile, the support from employer is helping. These results confirm the results of other studies (e.g., Baker & Lattuca, 2010) that employed doctoral students have already formed a certain identity and the employer has an impact on ones' experience in doctoral journey.

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