DIFFERENT SOURCES OF SOCIAL SUPPORT FOR DIFFERENT IDENTITIES OF PROFESSIONAL ROLES: A SURVEY OF LITHUANIAN DOCTORAL CANDIDATES

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Abstract

The **purpose** of this study was to analyze whether the availability of social support can help improve the professional identity of Lithuanian doctoral candidates. This is because the lack of support may be detrimental to progress in doctoral studies and conversely, social support may have a significant impact on professional identity development and expression.

Methodology. The data were gathered through internet-based survey questionnaire. The instrument to measure doctoral candidates' professional identity was developed and used. This instrument (27 items, $\alpha = 0.841$) measures identity expression of 3 professional roles: researcher ($\alpha = 0.801$), teacher ($\alpha = 0.844$) and practician ($\alpha = 0.730$). Also, social support (12 items, $\alpha = 0.740$) was measured, the subscales are: supervisor support ($\alpha = 0.892$), colleagues support ($\alpha = 0.819$), and family and friends support ($\alpha = 0.720$). Participants in this study were a sample of doctoral candidates ($N = 124$). The students represent a wide variety of profiles, ranging from technology and engineering to psychology and other social sciences.

Findings. The hierarchical multiple regression analysis indicated that in contrast to years of doctoral studies and science (study) area, social support has a significance in prediction of doctoral candidates' professional identity ($F = 2.91$, $p < 0.05$). Analysis of the results revealed that researcher's professional role identity was significantly predicted by supervisor support ($p < 0.01$) and colleagues support ($p < 0.01$). Also, colleagues support was a significant predictor of teacher's professional role identity ($p < 0.01$), and all kind of social support (overall) was a significant predictor of practician's professional role identity ($p < 0.05$).

Research implications. The outcomes of research can help us understand about how doctoral candidates' professional identity „works". Also, findings inevitably inspire new questions that lead to further research.

Practical implications. These results are important for doctoral candidates and organizers of doctoral programs, in order to improve the professional identity of doctoral students and to help them understand who they are and want to be after studies completion.

Originality/Value. This is an attempt to show that not only doctoral programs should be improved but also encouragement of supervisors and colleagues to provide a support for doctoral candidates is very important.

Keywords: professional identity, social support, doctoral candidates.

Research type: research paper.

Introduction

The increased in time-to degree and attrition rates of doctoral candidates is a serious problem which exists in the academic world (West et al., 2011). Doctoral education attrition rates is approximately 50 % in some disciplines (McAlpine and Norton, 2006). This highlights the importance of identifying challenges and sources of support available for doctoral students.

One of the challenges doctoral students face is multiple identities and roles they hold in academic environment (Colbeck, 2008; Jazvac-Martek, 2009; Lovitts, 2005). On the other hand, social support is the factor that may have a significant impact on professional identity development and expression (Baker and Lattuca, 2010; Chapman et al., 2009; Colbeck, 2008; Dobrow and Higgins, 2005; Ghosh and Githens, 2009; Martinsuo and Turkulainen, 2011; Sweitzer, 2009).

So the purpose of this study was to seek answers to the question as to whether the availability of social support can help improve the professional identity of Lithuanian doctoral candidates. And if this is true, what source of support is important for different professional role identities?

Literature Review

An essential task for doctoral students is to develop an identity as a scholar as well as a member of a discipline. PhD students must develop self-images as legitimate members of professional scholarly communities who have responsibilities for contributing to the scholarly endeavors of those communities (Austin and McDaniels, 2006).

A professional academic identity that develops through the doctoral journey represents a dynamic configuration of elements that are internal (psychological) and developmental, and external, involving the social and disciplinary (Jazvac-Martek, 2009).

Individuals' identities are typically associated with labels for social roles or positions. Role labels convey meanings and expectations for behaviour that have evolved from countless interactions among people in a social system. Once an individual has accepted and internalized meanings and expectations for a particular role, that identity becomes a cognitive framework for interpreting new tasks and experiences (Colbeck, 2008).

Roles are supported through the reactions and behaviours of other people in a social system and act to confirm the person as being occupant of a particular social position (e.g., researcher, teacher, dissertation-writer). An internalized identity (i.e., the role identity) motivates behaviour and dictates changes to external behaviours (Jazvac-Martek, 2009).

A sociocultural perspective on identity development focuses on the social contexts and interactions that shape doctoral students' minds about which identities are valued in

a given community, which are available to them, and which are to be avoided (Baker and Lattuca, 2010).

Ibarra (1999) presented how people adapt to new roles by experimenting with provisional selves „that serve as trials for possible but not yet fully elaborated professional identities" (p. 765). This adaptation involves three basic tasks: (1) observing role models to identify potential identities, (2) experimenting with provisional selves, and (3) evaluating experiments against internal standards and external feedback.

West et al. (2011) explored the barriers and challenges students face while pursuing their degree. The relationship with chairs were identified as one of the most common challenges, while classmates, dissertation chairs, and the doctoral support center were identified as major sources of support for students.

The relationships are central determinants that contribute to the development of professional identity (Baker and Lattuca, 2010; Chapman et al., 2009; Colbeck, 2008; Dobrow and Higgins, 2005; Ghosh and Githens, 2009; Martinsuo and Turkulainen, 2011; Sweitzer, 2009) and contribute to the progress in doctoral studies (de Valero, 2001; Ives and Rowley, 2005; Pyhältö et al., 2012; Tenenbaum et al., 2001).

The relationship between doctoral student and *research supervisor* or scientific advisor has been shown to be an important factor impacting doctoral student's professional identity development (Baker and Lattuca, 2010; Ghosh and Githens, 2009), engagement (Mainhard et al., 2009), degree completion and time to degree in doctoral programs (de Valero, 2001; Gardner, 2009; Spilett, 2004) and success in study process (Martinsuo and Turkulainen, 2011; Sweitzer, 2009). For instance, Pyhältö et al. (2012) showed that in faculties where the students' and the supervisors' perceptions of resources and challenges vis-a-vis the doctoral journey were similar, the students reported being more satisfied with their overall study process and supervisory support. Moreover, Ives and Rowley (2005) found that a constructive supervisory relationship was related to students' progress and satisfaction with their doctoral studies as well as with the involvement in their thesis projects. Tenenbaum et al. (2001) mentioned three types of support that can be provided by scientific advisors: (1) instrumental support (including coaching, sponsorship, exposure to academic life, and opportunities for challenging assignments) is associated with student's productivity (i.e., publications, posters, conference talks); (2) psychosocial support (including role modeling, empathizing, and counseling) contributes to student's satisfaction with their research supervisor and with their graduate school experience; (3) networking assistance (including helping students make connections in the field) is associated to student's productivity.

Scholarly community is another important factor in doctoral students' study and developmental processes (Carter 2006; Chapman et al., 2009; Ghosh and Githens, 2009; Ibarra et al., 2005). For instance, Kim and Karau (2009) found that support of faculty members has an impact on research productivity of doctoral students. Positive relationships with colleagues contribute to students' resilience (Hoskins and Goldberg, 2005), students experience in doctoral process (Hopwood, 2010; Pyhältö et al., 2009), competences developed during their studies, time-to-candidacy, and employment after finishing doctoral studies (Lovitts, 2005; Martinsuo and Turkulainen, 2011). Also, Golde

(2005) found that a misfit between doctoral students' goals and expectations as well as the norms and practices of their scholarly community affected their persistence.

Support from *family members* is cited as critical to doctoral study process, providing the encouragement needed to persist and succeed. Especially for women, who usually have more responsibilities at home and for child care, problems in this domain seem more likely to impact them to a greater extent than their male counterparts (Maher et al., 2004). Sweitzer (2009) found that family support is regarded as the most important factor to first year success.

The feeling of isolation is one of the biggest challenges faced by students when making dissertations (Gardner, 2009). To avoid this problem, sufficient social support should be available for doctoral candidates. As mentioned above, social support from various sources (advisor, colleagues and family) contributes to the positive outcomes of doctoral students' development and success in study process. However, empirical evidence about the social support sources that contribute to various aspects of doctoral student's professional role identities is still scarce.

Participants

The data were gathered through internet-based survey questionnaire. Participants in this study were a sample of doctoral candidates (N = 124) from nine institutions of higher education in Lithuania. The participants were from the humanities (9.7%) physical (8.1%), biomedical (11.3%), technological (27.4%), and social (43.5%) sciences. Thirty-four percent of the respondents were male and 66 % were female. The mean age of the respondents was 28.5. Across the PhD candidates, 21 % were first year students, 16.4 % second, 22.6 % third, 31.5 % fourth, and 5.6 % were already finished their studies, but not defend their thesis yet.

Measures

The instrument to measure doctoral candidates' professional identity was developed and used. On purpose to respond the need of instruments (in Lithuania and abroad) measuring professional identity of doctoral students, new instrument was developed. Based on the *Social identity theory*, an instrument measures different professional roles of doctoral students. The instrument (27 items, α = 0.841) measures identity expression of these 3 professional roles: researcher (9 items, α = 0.801), teacher (9 items, α = 0.844) and practician or service provider (e.g. psychologist) (9 items, α = 0.730). A five-step procedure (Fleming et al., 2011) was used to develop the instrument: systematic literature review, item generation, revision, external expert review and pilot. Three professional roles were selected from the range of roles presented in the literature. After systemize of potential criteria and indicators, items were generated and after careful review items were selected for the instrument. The instrument was sent with request for comment to tree scientists who specialize in the fields of research methodology and professional identity. After review of the comments and necessary changes made, the instrument was finalized.

Before use in a larger sample, the instrument was piloted with twelve doctoral students in psychology to increase clarity and usability of the instrument.

Social support (12 items, α = 0.740) was measured with three subscales: supervisor support (4 items, α = 0.892), colleagues and other PhD students support (4 items, α = 0.819), and support from family and friends (4 items, α = 0.720). Subscales were developed based on works of Martinsuo and Turkulainen (2011) and Caplan et al. (1975, see in Fields, 2002) in the field of social support.

Results

The analysis examined the extent to which social support can enhance the professional identity of doctoral candidates in Lithuania. The data analyses were conducted in two steps. In the first instance, the means, standard deviations, correlations and internal consistency estimates (*Cronbach's alpha*) were computed for each of the variables. Secondly, a series of multiple (hierarchical) regression analyses were conducted.

The results of *One Way ANOVA* revealed that there is no statistically significant difference between men and women analyzing professional identity. The dimensions or subscales of professional identity of doctoral candidates are expressed almost equally: researcher's professional role identity (M = 36.82, SD = 5.42), teacher's professional role identity (M = 34.20, SD = 6.45), and practician's professional role identity (M = 36.52, SD = 4.98). Social support is accessible from research supervisor or scientific advisor (M = 14.78, SD = 4.43), colleagues and other PhD students (M = 14.49, SD = 3.80), family and friends (M = 16.31, SD = 3.03). It means that respondents reported satisfactory levels of social support. This interpretation is based on the fact that the maximum score that can be obtained from the each social support subscale is 20.

Correlation analysis revealed that researcher's professional role identity was significantly correlated with social support from research supervisor (r = 0.33, p < 0.01), colleagues and other PhD students (r = 0.31, p < 0.01), as well as overall social support (r = 0.20, p < 0.05); teacher's professional role identity was significantly related with social support from colleagues (r = 0.30, p < 0.01), family and friends (r = 0.21, p < 0.05); and practician's professional role identity was significantly related with overall social support (r = 0.18, p < 0.05).

The hierarchical multiple regression analysis (*Enter method*) was used to analyze the importance of social support for doctoral candidates' professional identity while controlling for years in PhD study programme and science (or study) area. The model provided a good fit to the data. The results are presented in Table 1.

The hierarchical multiple regression analysis indicated that a significant model emerged (F = 2.91, p < 0.05). The contribution of the social support to the model was significant, thus social support was a significant predictor of professional identity of doctoral candidates. Stated differently, social support was significantly related to professional identity when years in doctoral studies and science (or study) area were controlled.

Table 1. Hierarchical multiple regression analysis of professional identity on social support and control variables

Variables	R-Squared	Changed R-Squared	Standardized Beta (ß)	F
Control variables	0.002	0.002		0.151
years in PhD programme			0.012	
science (study) area			0.050	
All variables	0.068	0.065		2.909*
years in PhD programme			0.053	
science (study) area			0.040	
social support			0.259**	

*$p < 0.05$, **$p < 0.01$

Table 2. Hierarchical multiple regression analysis of professional identity dimensions on social support subscales

Variables	R-Squared	Adjusted R-Squared	Standardized Beta (ß)	F
Researcher's professional role identity	0.157	0.129		5.552**
supervisor support			0.287**	
colleagues support			0.263**	
family and friends support			0.018	
overall social support			0.098	
Teacher's professional role identity	0.112	0.082		3.763**
supervisor support			0.065	
colleagues support			0.267**	
family and friends support			0.159	
overall social support			0.054	
Practician professional role identity	0.049	0.017		1.546*
supervisor support			0.126	
colleagues support			0.052	
family and friends support			0.061	
overall social support			0.290*	

*$p < 0.05$, **$p < 0.01$

The subscales of social support were examined by regressing separately the each dimension of professional identity on each of the support subscales: supervisor support, colleagues and other PhD students support, and support from family and friends. The results are shown in Table 2.

The hierarchical multiple regression analysis revealed that researcher's professional role identity was significantly predicted by supervisor support ($p < 0.01$) and colleagues support ($p < 0.01$). Also, colleagues support was a significant predictor of teacher's professional role identity ($p < 0.01$), and all kind of social support (overall) was a significant predictor of practician's professional role identity ($p < 0.05$).

The R-squared and adjusted R-squared measures the explanatory or predictive power of a regression model. It represents the proportion of variance in the outcome variable which is explained by the predictor variables in the sample (R-squared) and an estimate in the population (adjusted R-squared) (Miles, 2005). In this study, the highest R-squared value is for researcher's professional role identity variable. It means, that 16 % of the mentioned variable variation can be explained by different sources of social support. Also, as our indicator of generalizability – the adjusted R-squared value – is not much lower than the R-squared value (R-squared = 0.157 and the adjusted R-squared =0.129), it means that the model is not over-fitted to the sample.

Discussion and conclusions

This study analyzed what role do social support play in doctoral students' professional identity development and what source of support is important for different professional role identities?

The hierarchical multiple regression analysis revealed that the contribution of the social support is significant, thus social support acts as a significant predictor of doctoral candidates' professional identity while controlling for years in PhD study programme and science (or study) area. These results confirm other studies, that highlights the importance of social support for professional identity (Baker and Lattuca, 2010; Chapman et al., 2009; Colbeck, 2008; Dobrow and Higgins, 2005; Ghosh and Githens, 2009; Martinsuo and Turkulainen, 2011; Sweitzer, 2009).

To my knowledge, this study was the first attempt to show that different sources of social support contribute to different aspects of doctoral students' professional identity. The results revealed that researcher's professional role identity was significantly predicted by supervisor support and colleagues support. It shows that the relationship between doctoral student and research supervisor has the major impact for students' progress or productivity. According to Tenenbaum et al. (2001), instrumental support provided by scientific advisors (such as coaching, sponsorship, exposure to academic life, etc.) contributes to student's productivity (publications, posters, conference talks, etc.).

The findings supported the previous research into doctoral education, which suggests that scholarly community is the important factor in doctoral students' study and development processes (Carter 2006; Chapman et al., 2009; Ghosh and Githens, 2009; Ibarra et al., 2005). This conclusion was based on the regression results that indicated the significance of support from faculty colleagues and other PhD students in the prediction of teacher's professional role identity. It is contrary to the research results of Kim and Karau (2009) who found that support of faculty members has an impact on research productivity of doctoral students. Findings of the present study suggest that

interaction with faculty members contribute to the internalization of the norms, values and practices that are related to teacher's competences developed as well as to teacher's professional role identity expression.

In this study, overall social support was a significant predictor of practician's professional role identity. And this part of results lefts some unanswered questions and space for future research. It is necessary to assess an employer support from working environment (if doctoral student is working outside the university), because this kind of support may impact doctoral students professional identity (Malfroy and Yates 2003), especially identification with professional role of practician or service provider.

Finally, the outcomes of research help us understand more deeply about how doctoral candidates' professional identity „works". The present study results indicate that ensuring sufficient amount of social support from different sources is essential task for institutions of higher education. To improve services for professional doctoral students, universities must turn their attention to support structures for doctoral candidates. Thus, universities or other institutions of higher education should enable and promote doctoral students to establish social networks with peers and other key figures of the scholarly community.

The present study was an attempt to show that not only doctoral programs should be improved but also encouragement of supervisors and colleagues to provide a support for doctoral candidates is very important.

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