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Exploring social work students' attitudes toward research courses: comparing students in Australia and Switzerland

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ABSTRACT

Several studies have confirmed social work students' reluctance about research courses. However, there remains little understanding of the determinants of students' interest in research courses. This study aimed to contribute to a more robust understanding of underlying dynamics influencing students' feelings regarding research courses through a comparison of students entering a BSW programme in Australia and Switzerland. We hypothesized that a) students' interest in research courses was predicted by students' fear of research courses and research orientation, b) their research orientation was determined by their fear of research courses, and c) their fear was predicted by their statistics anxiety and general self-efficacy. For data collection, we used an anonymous self-administered online questionnaire. Data were analysed using descriptive statistics, multivariate analyses and structural equation modelling. The sample included 165 Australian and 245 Swiss students (N=410). In both student groups, interest in research courses was predicted by students' fear of research courses and their research orientation. Fear of research courses was predicted by general self-efficacy and statistics anxiety. Fear of research courses did not determine research orientation. Regardless of the diverse contexts, in both groups the predictors of research interest proved to be the same.

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Social work education; research education; attitudes; interest; predictors; BSW students; Switzerland; Australia; structural equation modelling

Introduction

In 2003, Butler claimed 'it is difficult to remember a time when interest in social work research was so widespread, so urgent and so apparently full of possibilities' (Butler, 2003, p. 19). Others too have observed a growing professional interest in the relationship between research and practice in social work (Cha et al., 2006). This increasing focus on research reflects a rising awareness of the role of scientific knowledge in professional courses of action and efforts to advance professionalization in social work (Gredig & Marsh, 2010). It also corresponds with the growth of the evidence-based practice movement, and simultaneous demands by neoliberal governments for accountability, efficiency, and cost effectiveness in the provision of social services (Estabrooks et al., 2008; Pope et al., 2011). Consequently, research has

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become an essential, rather than an optional, skill for social work graduates (Blakemore & Howard, 2015). For example, Global Standards for Social Work Education and Training stipulate that social work students must have 'knowledge of social work research and skills in the use of research methods' (IASSW&IFSW, 2004, p. 7). In fact, across many countries, research courses have become a taken-for-granted component of social work education, training and practice. Thus, the importance of research in social work and its place in social work education are well established (Bolin et al., 2012).

Nevertheless, engaging social work practitioners and students in the research endeavour continues to remain difficult (Bolin et al., 2012). The social work profession has been identified as the slowest to generate and take up knowledge in evidence-based practice (Gray et al., 2009). Among social work students too, studies have identified 'ambivalence' 'reluctance', 'resistance' and 'anxiety' at the prospect of completing research courses in social work programmes (Bolin et al., 2012; Gredig & Bartelsen-Raemy, 2018; Green et al., 2001; Maschi et al., 2007; Morgenshtern et al., 2011; Secret et al., 2003). This finding is not new; in 1987, Epstein described social work students as 'research reluctant', observing that 'no other part of the social work curriculum has been so consistently received by students with as much groaning, moaning, eye-rolling, hyperventilation, and waiver strategizing as the research course' (Epstein, 1987, p. 71). While studies continue to report 'negative feelings' of social work students about research courses (Morgenshtern et al., 2011, p. 555), there is now increased recognition that student attitudes towards research courses are quite complex and can include considerable variation (Secret et al., 2003).

In 2001, Green, Bretzin, Leininger, and Stauffer found that social work students attributed less importance to research and reported higher research anxiety than students in business and psychology (Green et al., 2001). A more recent study confirmed social work students' 'apprehension' towards research courses (Morgenshtern et al., 2011), while another reported on students' 'disappointing' lack of interest and 'enthusiasm' for research courses (Bolin et al., 2012, p. 238). A more promising observation by Maschi et al. (2007) was that, while students initially experienced research anxiety, this decreased in the process of the research course. Also on a more positive note, Secret et al. (2003) identified higher degrees of interest in research courses among social work students than previously thought. While some students in their study were fearful of research, this fear did not dampen the overall appeal of the research course. Therefore, they emphasised the 'significance of not oversimplifying student feelings about research nor overgeneralizing about negative research attitudes' (Secret et al., 2003, p. 418).

The widespread characterisation—or stereotype—of social work students as 'research reluctant' is often based on the perceptions of social work faculty, as well as on studies that compare social work students with peers in other disciplines (Secret et al., 2003). Notably, this rather negative characterisation does not always match the views expressed by students themselves. In a study that has remained unique since, Lazar (1991) found that students reported positive attitudes about studying research, which did not match the significantly less positive assumptions made by faculty. Secret cautioned that these 'erroneous or incomplete assessments of social work student attitudes towards research' can have significant implications for students, influencing the classroom atmosphere

(Forte, 1995) and limiting student achievement (Montcalm, 1999) by fostering a 'self-defeating prophecy of negativity in social work research classes' (Secret et al., 2003, p. 412).

In the social work literature, there are a range of suggestions to address the perceived 'research reluctance' of social work students by fostering appreciation and enthusiasm for research (see, for example, Berger, 2002; Bolen, 2006; Harder, 2010; Jacobson & Goheen, 2006; Kapp, 2006; Knee, 2002). For example, staff at a university in Australia developed a time and resource intensive work-integrated learning model to enhance student engagement with an undergraduate research course, in response to 'continued observations' by educators that students are 'indifferent and reluctant to engage in research training' (Blakemore & Howard, 2015, p. 861). Other studies have identified ways in which teachers can effectively encourage students to better manage their anxiety (see, for example, Einbinder, 2014; Maschi et al., 2013).

While these studies provide useful didactic approaches to structuring and teaching research courses in social work, it seems appropriate to refrain from generalisations and to assess the attitudes of the students enrolled in a given programme. As Secret et al. already called for in 2003, there is a need to develop a more 'accurate and comprehensive' understanding of social work student attitudes towards research courses, in order to help social work educators discover and make use of the most appropriate and effective teaching strategies (Secret et al., 2003, p. 412).

A range of factors have been identified as contributing to the reported appeal of students towards research courses. The interest in research courses was influenced by students' research orientation, which refers to the perceived importance and the attributed usefulness of research for social work practice as well as the perceived unbiased nature of research. It was also impacted by student age and gender. Other contributing factors were fear of research courses (as separate from fear of research), statistical knowledge and/or anxiety, and self-efficacy (for recent findings see Bolin et al., 2012; Green et al., 2001; Secret et al., 2003). To our knowledge, the most recent study on predictors of students' interest in research courses confirms students' research orientation (in terms of attributed importance and usefulness for practice) and fear of research courses (in terms of worries, concerns and strain) as predictors of interest in research courses (Gredig & Bartelsen-Raemy, 2018).

It should be noted that the available studies investigated different student populations, including undergraduate (bachelor's) and postgraduate (master's) students, research course-inexperienced students entering their first research course (Secret et al., 2003), and research course-experienced students attending their last research course (Lazar, 1991) or having successfully completed up to two research courses (Bolin et al., 2012). This means that student attitudes in these studies may have been influenced to differing degrees by faculty and perceptions of fellow students' opinions on research courses. To our knowledge, very few studies have investigated students' views and feelings about research courses when entering a BSW programme. Our recent study focussed exclusively on entering BSW students' interest in research courses enrolled in a programme in Switzerland (Gredig & Bartelsen-Raemy, 2018). It is critical to develop a more refined understanding of factors influencing students' interest in research courses at this early stage, as it has the potential to enhance social work educators' awareness of the specific

dynamics they should consider from the outset, namely when conceptualising and delivering their courses.

Further it should be noted that the studies modelling students' interest in research courses focussed on students enrolled in specific programmes run by a university in the USA (see, for example, Bolin et al., 2012; Maschi et al., 2007), Canada (see, for example, Morgenshtern et al., 2011), Israel (Lazar, 1991) or Switzerland (Gredig & Bartelsen-Raemy, 2018). Accordingly, the authors of these contributions regularly pointed out that generalisations should be made with caution as the findings might be dependent on the specific programme or university, or the wider context. More studies are needed that investigate the attitudes of students from more than one programme, university and/or country, to contribute to a more robust understanding of the interplay of factors affecting students' interest in research courses in various contexts. Our study seeks to address this gap by examining bachelor's programmes run by two higher education institutions in Australia and Switzerland.

Contexts

We assume there are commonalities as well as specific differences regarding the contexts of social work education and practice in Australia and Switzerland. For example, we may expect differences in the societal, political and legal conditions, the welfare regimes and social security systems, users' and communities' needs, the role of social work in particular fields as well as the remit of specific agencies in Australia and Switzerland. Below, we outline some of the contextual aspects related to social work education, research-related coursework of two BSW programmes and human services workforces in Australia and Switzerland.

The Australian context

In Australia, social workers have been trained in universities since World War II, and research courses have been a taken-for-granted component of social work programmes for many years. While the profession in Australia is not registered, principles and graduate attributes for social work education are set out by the Australian Social Work Education and Accreditation Standards (Australian Association of Social Workers, 2015). Students typically enter a BSW programme via a range of pathways to tertiary education, including traditional secondary education (Higher School Certificate) or a Technical And Further Education (TAFE) qualification. There is no requirement for students to have had previous work experience prior to commencing their social work studies, although a large number of social work students in the Australian programme have had personal and/or professional exposure to social work prior to commencing their studies (Byrne, 2017).

The BSW programme at the Australian university under investigation includes two research courses. The first is offered in the second semester of the third year of a four-year programme, immediately after students have completed their first 70 day (500 hours) field placement. This course provides students with an introduction to research in social work, and is designed to prepare them for their final research project during their fourth year of study. The second is an honours project course completed at the beginning of the

fourth year before their final 70 day (500 hours) field placement. Consistent with the embedded honours system at the university under consideration, all students in the programme must complete the honours project to receive their degree. Students receive very little explicit instruction on research or research skills at the beginning of their studies, although the importance and relevance of research to practice is emphasised throughout.

With regard to the human services workforce in Australia, this includes a highly diverse qualification base (Healy & Lonne, 2010). While in some sectors, such as healthcare, social support is provided exclusively by accredited social workers or psychologists, in other sectors, such as child protection services, services are provided by a range of 'social welfare professionals', including professionally qualified social workers and paraprofessionals such as family support workers or youth workers. In this sector, it has been repeatedly noted that the least experienced workers hold responsibility for many of the most difficult and demanding front-line tasks, such as assessment and intervention in case of child abuse risk (Healy & Meagher, 2004). Thus, although accreditation requirements for social work programmes in Australia stipulate that students on placement must receive supervision from an accredited social worker, many students are placed in human services organisations that do not employ accredited social workers. Although these students are provided with an external social work-accredited supervisor, in their day-to-day practice they regularly observe the practice of practitioners who do not hold formal social work qualifications, but who may nonetheless hold a great deal of responsibility and power. Despite this mismatch of education and responsibility and the diversity in qualifications, there seem to be signs that evidence-based practice is supported by a significant proportion of practitioners (Gray et al., 2014).

The Swiss context

In Switzerland, social work education was conceived as higher vocational training until 1998, when it was placed on a tertiary level on a large scale (Gredig & Goldberg, 2010). In addition, social work in Switzerland is not a registered profession. Unlike in Australia, the professional association for social workers in Switzerland has no institutional power to control decisions about social work education and training, accreditation or the qualification or disciplinary affiliation of teachers in social work programmes. Entrants to a BSW programme in Switzerland must have obtained a general, professional or specialised baccalaureate, professional college diploma, intermediate diploma school certificate or have undergone a specific admission procedure. In addition, they have to document work experience of at least one year (EDK/FDK, 1999). Some universities require that this includes a minimum of six months' experience in social work (pre-study field placement). Thus, students entering a programme have been exposed in some way to the experience of diversity among social work practitioners regarding training, degrees and attitudes towards the use of research in practice and related curricular content.

The Swiss BSW programme aims to prepare students for the critical utilisation of research findings and scientific knowledge. For this purpose, the programme of the school under investigation includes a strand of four required modules directly related to research: techniques for scientific work, social science research methods and research skills. This curriculum introduces research and research skills to the students from the beginning of their studies. This reflects the understanding that the engagement with research is

conceived as an integral part of the (basic) professional skills of social workers rather than a matter of refinement or specialisation for students with specific career plans.

As in Australia, the social or human services workforce in Switzerland includes highly diverse staff with varying (i.e. vocational, higher vocational and tertiary) levels of formal and informal education. In fact, the so-called ‘academization’ of vocations continues to be questioned in public discourse in Switzerland (see, for example, reports by Krummenacher, 2018; Widmer, 2018), and a recent assessment suggested that, at least in some fields, organisations continue to employ a noteworthy proportion of staff without a formal qualifying degree (Institut für Wirtschaftsstudien Basel, 2016).

Study objectives and research questions

The main aim of the study was to investigate social work student interest in research courses at the time of entering a Bachelor of Social Work (BSW) programme. Exploring students’ views and feelings at this early stage was considered important for understanding their initial feelings and perceptions before they had been influenced by the social work curriculum or faculty opinions—either positively or negatively. Second, the study aimed to advance current understandings of the interplay of factors determining students’ interest in research courses by extending and testing an explanatory model we had previously tested in the Swiss context (Gredig & Bartelsen-Raemy, 2018). This model considers ‘fear of research courses’ defined as worries, concerns and strains (Baird, 2016) in relation to research courses, including the ‘fear that one would not be able to cope with the demands of the course’ (Bolin et al., 2012, p. 226). In this model, ‘fear of research courses’ is not conceived as a personality trait but rather, as a feeling emerging in a specific context and interacting with, among others, the curricular setting, didactic arrangements, teachers’ attitudes, peer students’ attitudes or the school climate. This contrasts with previous studies which focussed mainly on ‘research anxiety’—a term that may ambiguously point to anxiety about research as well as to anxiety about research courses and, in some studies, ‘anxiety’ has been used to refer to feelings of an intensity that may be clinically relevant (see, for example, Einbinder, 2014). ‘Statistics anxiety’ refers to emotional reactions including tension, worry, nervousness, and apprehension associated with taking courses in statistics, using numbers and manipulating mathematical symbols (Davis, 2008).

The present study aligns with and extends this emerging explanatory model using quantitative research methods. Overall, it aims to contribute to a more robust understanding of underlying dynamics determining students’ research orientation and feelings regarding research courses.

Thus, the objectives of the study were to:

- (a) assess student interest in research courses, fear of research courses and research orientation at the time of entering a BSW programme in Australia and Switzerland.
- (b) test the proposed explanatory model explaining entrant students’ interest in research courses, and
- (c) compare findings on student interest in research courses between entrant students populations from Australia and Switzerland.

Hypotheses

We hypothesized that:

- (a) entrant students' interest in research courses is predicted by their fear of research courses and research orientation,
- (b) their research orientation is determined by their fear of research courses, and
- (c) their fear is predicted by their statistics anxiety and general self-efficacy.
- (d) Given the well-established status of social work as a tertiary-level qualification in Australia, and the support for evidence-based practice among practitioners (Gray et al., 2014), it was hypothesized further that d. entrant students in Australia show higher levels of interest in research courses, have a stronger research orientation and report lower levels of fear of research courses than students in Switzerland.

Methods

Design and data collection

The study had a cross-sectional design and was based on data collected from students entering a BSW programme in Australia and in Switzerland. The project received ethics approval from the Human Research Ethics Committee of the participant university in Australia (No: H-2016-0423). For data collection, we used an anonymous, standardised, self-administered questionnaire which was accessible online with an open access link.

Sampling

This study included an availability sample of entry-level students enrolled in a BSW programme in Australia (AUS) and in Switzerland (CH). Given the smaller numbers of students enrolled in the programme in Australia, we asked students entering the programme in February 2017 and February 2018 to complete the questionnaire during their very first week of programme attendance. In Switzerland, the survey was launched during the introduction event two weeks before the programme commenced in September 2017.

Questionnaire development and measures

Participants were provided with an information statement and a link to the questionnaire, which also included information about the study objectives and instructions for participants.

'Interest in research courses' was measured using a scale validated by Bolin et al. (2012) (in English) and Gredig and Bartelsen-Raemy (2018) (in German) which includes six items (e.g., 'When I imagine that I must read research textbooks or articles, I am . . .') and allows respondents to select a response from a 5-point Likert scale ranging from 1 = 'strongly interested' to 5 = 'strongly disinterested'. The construct had good internal consistency. Cronbach's alpha was 0.834 (AUS) and 0.836 (CH). In order to facilitate understanding of the findings, the values were reverse coded: High values express high interest (5 reads 'strongly interested'). The construct was calculated using the mean of the responses to the corresponding items.

'Research orientation' was operationalised by the 'perceived importance of research for social work practice', the 'attributed usefulness of research for social work practice', and the 'perceived unbiased nature of research'. To measure these constructs, measures validated by Bolin et al.'s (2012) (in English) and Gredig and Bartelsen-Raemy (2018) (in German) were used, which were derived from the Kirk-Rosenblatt Research Inventory (Kirk & Rosenblatt, 1981).

The 'perceived importance of research' for social work practice was measured using five items (e.g., 'Social workers should base their practice on knowledge gained from research') with a 5-point Likert response scale. The internal consistency of this construct was not satisfactory. Cronbach's alpha scores were 0.479 (AUS) and 0.592 (CH). Although the measures of the 'perceived importance, the attributed usefulness, and the perceived unbiased nature of research (Kirk & Rosenblatt, 1981) have been implemented in many studies on research orientation, they have rarely had acceptable internal consistency (for the critique see Gregory, 2010). While Cronbach's alpha of the scale measuring the perceived importance of research was 0.65 in the original study by Kirk and Rosenblatt (Kirk & Rosenblatt, 1981), in Bolin et al.'s (2012) study it was 0.75, and in Gredig and Bartelsen-Raemy's (2018) study it was 0.60. Data analysis showed that the inter-item correlations of the five items were rather weak. In the Australian sample, one item ('social workers should always keep abreast of research in the field of their practice') had especially low correlations and was therefore excluded from the scale in both languages. This resulted in a better, although still low, internal consistency: alpha scores were 0.565 (AUS) and 0.563 (CH). Finally, an explorative factor analysis was performed, which included the remaining four items, in order to test the structure of the measure. The principal component analysis, using oblimin rotation, extracted one factor with an eigenvalue higher than one in both samples. The eigenvalue of this factor was 1.8 (AUS) and 1.749 (CH) and explained 44.98% (AUS) and 43.72% (CH) of the variance (Kaiser-Meyer-Olkin measure = 0.633 [CH] and 0.648 [AUS]; Barlett's test $p = \leq 0.001$ [both]). This result was interpreted as confirmation that the instrument measured one construct. Thus, a decision was made to accept the low internal consistency and include the construct in this form in the further analysis. The construct was computed using the mean of the responses to the corresponding items.

The 'attributed usefulness of research' for social work practice was captured by five items (e.g., 'Social work research is not particularly useful to practitioners providing direct services') with a 5-point Likert response scale. The internal consistency of this construct was not fully satisfactory. Cronbach's alpha was 0.583 (AUS) and 0.567 (CH). In the original study by Kirk and Rosenblatt, Cronbach's alpha of this scale was 0.71 (Kirk & Rosenblatt, 1981). In the study by Bolin et al. (Bolin et al., 2012) the scale had a Cronbach's Alpha of 0.83, and in Gredig and Bartelsen-Raemy's (2018) study the scale obtained a score of 0.53. Analysis of data for this study showed that the inter-item correlations of the five items were weak. In this case, the exclusion of any item would have resulted in an even smaller Cronbach's alpha. The principal component analysis included the five items. Using oblimin rotation, in both arms the analysis extracted only one factor with an eigenvalue higher than one. The eigenvalue of this factor was 1.925 (AUS) and 1.866 (CH) and explained 38.5% (AUS) and 37.32% (CH) of the variance (Kaiser-Meyer-Olkin measure = 0.683 [AUS] and 0.651 [CH]; Barlett's test $p = \leq 0.001$ [both]). We interpreted this finding as confirmation of the measurement model. Thus,

again, we decided to accept the low internal consistency and include the construct in this form in the further analysis. Since all items were negative in form, the values were reverse coded with the effect that high values expressed high levels of attributed usefulness. The construct was calculated using the mean of the responses to the corresponding items.

To measure the ‘perceived unbiased nature of research’, six items (e.g., ‘Many research findings are skewed in order to appeal to funding resources’) were used with a 5-point Likert response scale. As all items were negative in form, the values were reverse coded with the effect that high values expressed high levels of attributed usefulness. Internal consistency of this construct was acceptable. Cronbach’s alpha was 0.624 (AUS) and 0.720 (CH). In both arms, exclusion of any item would have resulted in an even smaller Cronbach’s alpha score. The construct was calculated using the mean of the responses to the corresponding items.

‘Fear of research courses’ was measured using a scale validated by Bolin et al. (2012) (in English) and Gredig and Bartelsen-Raemy (2018) (in German) which comprises six items (e.g., ‘If I imagine that I must attend a lecture about research, my level of anxiety is ...’) and allows respondents to choose a response from a 5-point Likert scale. The construct had a high level of internal consistency. Cronbach’s alpha was 0.830 (AUS) and 0.837 (CH). The values were recoded with the effect that high values expressed a high level of fear. The construct was calculated using the mean of the responses to the corresponding items.

‘Statistics anxiety’ was captured by the self-concept dimension of the Statistical Anxiety Rating Scale developed by Cruise et al. (Cruise et al., 1985; Hanna et al., 2008). The scale included seven items (e.g., ‘I do not have enough brains to get through statistics’) with a 5-point Likert response scale. The internal consistency of the construct was good, with Cronbach’s alpha scores of 0.862 (AUS) and 0.877 (CH). The construct was calculated summing up the scores of the items. High values express a high level of statistics anxiety.

The scale developed and validated in English and German by Schwarzer and Jerusalem (Jerusalem and Schwarzer, oJ; Schwarzer and Jerusalem, ND) was used to measure ‘general self-efficacy’. It includes 10 items (e.g., ‘I can always manage to solve difficult problems if I try hard enough’) with a four-point Likert response scale ranging from 1 = ‘not at all true’ to 4 = ‘exactly true’. The internal consistency of the construct was good, with Cronbach’s alpha scores of 0.850 (AUS) and 0.751 (CH). The construct was calculated by adding up the scores of the ten items.

Further, the questionnaire captured the age of the students and the gender they identified with, the campus where the students were enrolled, the programme modality students had chosen, and their entry qualification.

In order to avoid position effects, the items measuring a specific construct were displayed in a randomised sequence. Further, the questionnaire was programmed to fit for laptop computers, tablet computers and smart phones. The questionnaire was tested in a cohort entering in 2016 in order to verify its comprehensibility and usability.

Analytic strategy

First, a descriptive analysis was performed. Based on Shapiro-Wilk’s test of normality, it was concluded that the data on the construct variables were non-normally distributed

with the exception of ‘fear of research courses’. Second, the correlations of these variables were determined using bivariate analysis. Third, and in order to test the hypothesised predictor model, a path analysis was performed.

The path analysis was performed using the Generalised Least Square Estimates method in AMOS 24. The variables were included and the paths specified according to the results of the previous series of multiple regression analysis. Variables without significant association with interest in research courses or the variables constituting research orientation or fear of research courses were not included into the model. Thus, in the Australian arm only age was maintained while in the Swiss arm gender, study modality and entry qualification were maintained. Structural equation modelling requires complete data sets. Missing data resulted in the exclusion of four respondents in the Australian arm and five respondents in the Swiss arm.

The eligible variables were entered into the structural equation at the same time and we did not perform modifications. ‘Research orientation’ was entered as a latent variable expressed by the ‘perceived importance’, the ‘attributed usefulness’ and the ‘perceived unbiased nature of research’. Variables that were measured on a nominal level (gender, campus, study modality and entry qualifications) were transformed into dummy variables. The variable labels displayed in the tables and graphs relate to the value 1. The study modalities were collapsed into two categories (full-time and part-time).

We used several indices to assess model fit and observed whether they would point to the same conclusion: The Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI). Both indices are considered satisfactory when larger than 0.90. The normed Chi-Square was also calculated, which is the Chi Square (CMIN)/degree of freedom (df)-ratio. Given the sample size, this ratio should result in a value smaller than 2 (Ullman, 2001). Further, we considered the standardised root mean square residual (SRMR). Its value should be smaller than 0.08 (Browne & Cudeck, 1993; Hu & Bentler, 1998). Finally, we calculated the root mean square error of approximation (RMSEA), which should result in a score smaller than 0.07 (Hooper et al., 2008). The adjusted coefficient of determination (adj. R^2) was calculated to express the extent to which the model was able to explain the variance in the dependent variable.

Results

Sample description

The samples consisted of 165 students entering the BSW programme in Australia (81 in 2017 and 85 in 2018) and 245 in Switzerland. This implies a response rate of 59.14% for Australia (59.12% in 2017 and 59.15% in 2018) and 75.38% for Switzerland. In the Australian group, participants’ ages ranged from 17 to 58 years, with a mean age of 24.7 years and a median age of 21 years. In the Swiss group, respondents’ ages ranged from 18 to 52 years, with a mean age of 26.2 years and a median age of 23 years. Further sociodemographic and study-related characteristics are detailed in [Table 1](#).

Table 1. Sociodemographic and study-related characteristics of the respondents (Australia, N = 165, Switzerland, N = 245).

Variable	Descriptor	Swiss university			Australian university		
		n	%	N	n	%	N
Year of survey	2017	245	100	245	81	49	165
	2018				84	51	
Gender				245			165
	Female	176	72		142	87	
	Male	69	28		23	13	
Entry qualification				245			165
	Professional baccalaureate	89	36				
	General baccalaureate	37	15				
	Specialized baccalaureate	83	35				
	Professional college diploma	1	.4				
	Intermediate diploma school certificate	16	6.5				
	High school certificate				109	66	
	Graduate diploma				44	27	
	Bachelor's degree				3	2	
Other	18	7		9	5.5		
Study modality				245			165
	Full-time study	103	42		143	87	
	Part-time study	61	25		22	13.3	
	Part-time study with concurrent field placement	81	33				
Campus				245			165
	North campus CH	68	28				
	South campus CH	177	72				
	North campus AUS				156	95	
	South campus AUS				9	5	

Levels of interest, fear and research orientation among students in the Australian and Swiss arm

Regarding interest in and fear of research courses, and research orientation, analyses evidenced no significant differences between the 2017 and 2018 Australian student cohorts. Thus, in further analyses, the two cohorts were collapsed into one group.

Entrant students' interest in research courses varied widely in the Australian and the Swiss group. Scores ranged from 1.17 to 4.67 in the Australian programme, and from 1.83 to 5 in the Swiss programme. The item with the highest mean score among students in the Australian programme referred to student's interest in hearing about research in a course ($M = 3.72$; $SD = 0.74$). In the Swiss group the item with highest mean score referred to asking a lecturer questions about research ($M = 3.98$; $SD = 0.73$). In both student groups, the item with the lowest mean score referred to interest in writing a research paper ($M = 3.05$; $SD = 1.03$ [AUS], $M = 3.23$; $SD = 0.91$ [CH]).

Both student groups reported elevated levels of interest in research courses, with an overall mean score of 3.42 ($SD = 0.64$) and a median of 3.5 in the Australian arm, and a mean score of 3.61 ($SD = 0.58$) and a median of 3.66 in the Swiss arm (see Table 2). However, levels of interest were significantly lower among students entering the Australian programme than among those entering the Swiss programme (see Table 3).

Levels of fear of research courses reported by participants varied widely too. Scores ranged from 1.00 to 4.67 in the Australian programme, and from 1.00 to 4.33 in the Swiss

programme. The item with the highest mean score in the Australian programme referred to the completion of an examination for a research course ($M = 3.68$; $SD = 0.91$). Among Swiss respondents, the item with highest mean score referred to completion of an in-class quiz on research ($M = 3.58$; $SD = 0.97$). In both student groups, the item with the lowest mean score referred to having to listen to another student explain a research topic ($M = 2.21$; $SD = 0.86$ [AUS], $M = 1.82$; $SD = 0.78$ [CH]).

Both student groups reported considerable levels of fear of research courses. This was reflected in an overall mean score of 2.83 ($SD = 0.65$) and a median of 2.83 in the Australian arm, and a mean score of 2.51 ($SD = 0.68$) and a median of 2.5 in the Swiss arm (see Table 2). However, as the Mann-Whitney U Test evidenced, levels of fear were significantly higher among students entering the Australian programme than among those entering the Swiss programme (see Table 3).

The scores for research orientation, i.e. the perceived importance of research for social work practice, the attributed usefulness of research for social work practice and the perceived unbiased nature of research, are displayed in Table 2. Again, there were significant differences between the scores obtained in the Australian and the Swiss respondents. On all three measures, students enrolled in the Australian programme scored significantly higher (see Table 3).

On the sum scale ranging from 7 to 35, levels of statistics anxiety ranged from 9 to 35 in the Australian programme and from 7 to 34 in the Swiss programme. Both student groups reported elevated levels of statistics anxiety. The mean score was 21.61 ($SD = 5.68$) and a median of 21.00 in the Australian arm and a mean score of 18.77 ($SD = 5.91$) and a median of 19.00 in the Swiss arm. Levels of statistics anxiety were significantly higher among students entering the Australian programme than among those entering the Swiss programme (see Table 3).

Regarding general self-efficacy, participants' scores ranged from 10 to 39 (on a scale ranging from 10 to 40) in the Australian arm and from 15 to 38 in the Swiss arm. The mean score was 30.54 ($SD = 3.85$) and a median of 30.54 in the Australian group and a mean score of 29.84 ($SD = 3.22$) and a median of 30 in the Swiss group. Although

Table 2. Description of the construct variables among students entering a BSW programme of an university in Australia or Switzerland.

Variable	Scale	Minimum/maximum	Range	Mean	SD	Median
<i>Students entering a BSW programme in Australia (N = 165)</i>						
Interest in research courses	1–5	1.17/4.67	3.50	3.42	0.64	3.50
Perceived importance of Research	1–5	2.20/5.00	2.8	3.55	0.51	3.60
Attributed usefulness of Research	1–5	2.20/5.00	2.80	3.80	0.50	3.80
Perceived unbiased nature of research	1–5	2.17/4.83	2.67	3.62	0.47	3.66
Fear of research courses	1–5	1.00/4.67	3.67	2.83	0.65	2.83
Statistics anxiety	1–35	9.00/35.00	26.00	21.61	5.68	21.00
General self-efficacy	1–40	10.00/39.00	29.00	30.54	3.85	30.54
<i>Students entering a BSW programme in Switzerland (N = 245)</i>						
Interest in research courses	1–5	1.83/5.0	3.17	3.61	0.58	3.66
Perceived importance of research	1–5	1.80/4.60	2.80	3.06	0.47	3.00
Attributed usefulness of research	1–5	2.00/5.00	3.00	3.39	0.57	3.40
Perceived unbiased nature of research	1–5	2.00/4.83	2.83	3.33	0.50	3.33
Fear of research courses	1–5	1.00/4.33	3.33	2.51	0.68	2.50
Statistics anxiety	1–35	7.00/34.00	27.00	18.77	5.91	19.00
General self-efficacy	1–40	15.00/38.00	23.00	29.84	3.22	30.00

Table 3. Comparisons of the scores among the entrant students of the Australian and the Swiss programme regarding interest in research courses, research orientation, fear of research courses, statistics anxiety and general self-efficacy.

Variable	Cohort	N	Mean rank	Mann-Whitney U	p
Interest in research courses	Australian university	165	189.47	17,567.0	0.024
	Swiss university	245	216.3		
Perceived importance of research	Australian university	165	270.57	9476.0	0.000
	Swiss university	245	161.68		
Attributed usefulness of research	Australian university	165	257.93	11,562.0	0.000
	Swiss university	245	170.19		
Perceived unbiased nature of research	Australian university	165	245.86	13,553.5	0.000
	Swiss university	245	178.32		
Fear of research courses	Australian university	165	236.30	15,130.0	0.000
	Swiss university	245	184.76		
Statistics anxiety	Australian university	165	237.94	14,860.5	0.000
	Swiss university	245	183.66		
General self-efficacy	Australian university	162	219.51	17,332.0	0.029
	Swiss university	245	193.74		

seemingly very close together, levels of interest significantly differed between the students entering the Australian programme and those entering the Swiss programme (see Table 3).

Predictors of students' interest in research courses

Regarding students entering the Australian programme, the path analysis showed that respondents' interest in research courses was predicted by their fear of research courses ($\beta = -0.30$), their research orientation ($\beta = 0.39$) and age ($\beta = 0.16$). Students reporting lower levels of fear, higher levels of research orientation or older age also reported higher levels of interest in research courses. Their fear was predicted by the level of their statistics anxiety ($\beta = 0.18$), their reported general self-efficacy ($\beta = -0.31$) and age ($\beta = 0.23$). This model explained 24% of the variance in interest in research courses and the indices used pointed to a good fit although the SRMR and RMSEA had scores slightly higher than perfect (GFI = 0.951, AGFI = 0.902; CMIN/df = 1.741; SRMR = 0.084; RMSEA = 0.068). These findings (see Table 4) are visualised in Figure 1.

Concerning students entering the Swiss programme, the analysis evidenced that respondents' interest in research courses was predicted by the reported level of fear

Table 4. Results of the structural equation modelling (standardised regression weights Beta, confidence intervals (95%) and p values) regarding students entering a BSW programme in Australia.

Regressions Variables		Beta	Confidence interval (95%)		P value
			Lower	Upper	
Fear of research courses	<← Statistics anxiety	0.181	-0.034	0.304	0.013
Fear of research courses	<← General self-efficacy	-0.310	-0.480	-0.152	≤0.001
Fear of research courses	<← Age	0.230	0.103	0.383	0.002
Perceived importance of research	<← Research orientation	0.251	0.041	0.449	—
Attributed usefulness of research	<← Research orientation	0.801	0.493	1.000	0.025
Attributed unbiased nature of research	<← Research orientation	0.604	0.427	0.787	0.019
Interest in research courses	<← Research orientation	0.390	0.163	0.635	0.015
Interest in research courses	<← Fear of research courses	-0.296	-0.437	-0.069	≤0.001
Interest in research courses	<← Age	0.161	-0.011	0.262	0.044

Note: GFI = 0.951, AGFI = 0.902; CMIN/df = 1.741; SRMR = 0.084; RMSEA = 0.068.

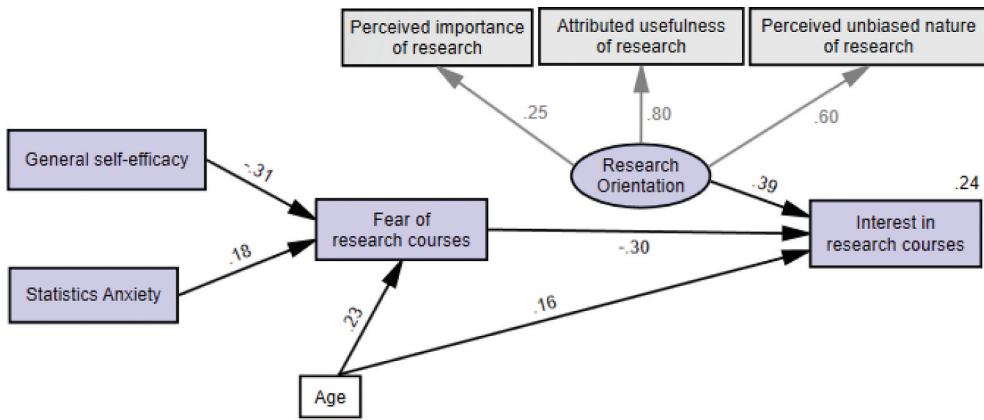


Figure 1. Path model explaining student’s interest in research courses entering a BSW programme of a university in Australia (N = 161). Note: GFI = 0.951, AGFI = 0.902; CMIN/df = 1.741; SRMR = 0.084; RMSEA = 0.068.

of research courses ($\beta = -0.39$) and research orientation ($\beta = 0.38$). Further, it was predicted by a specific entry qualification ($\beta = -0.11$). Fear of research courses was determined by respondents’ statistics anxiety ($\beta = 0.23$), their reported general self-efficacy ($\beta = -0.32$) and (female) gender ($\beta = 0.16$) while gender also turned out to be a predictor of statistics anxiety ($\beta = 0.20$). Students’ research orientation, in turn, was predicted by their age ($\beta = 0.19$). This model explained 32.4% of the variance in interest in research courses and proved to have a very good fit (GFI = 0.968, AGFI = 0.941; CMIN/df = 1.304; SRMR = 0.0682; RMSEA = 0.035). These findings (see Table 5) are visualised in Figure 2.

The comparison of the findings of the two path models shows that the causal pathways are the same as far as the construct variables are concerned. There are differences regarding participants’ sociodemographic and study-related characteristics and the

Table 5. Results of the structural equation modelling (standardised regression weights Beta, confidence intervals (95%) and p values) regarding students entering a BSW programme in Switzerland.

Parameter		Beta	Confidence interval (95%)		P value
			Lower	Upper	
Statistics anxiety	<← Gender: female	0.198	0.066	0.323	.002
Fear of research courses	<← Gender: female	0.156	0.035	0.275	.010
Fear of research courses	<← Statistics anxiety	0.226	0.065	0.349	≤0.001
Fear of research courses	<← General self-efficacy	-0.319	-0.444	-0.157	≤0.001
Perceived importance of research	<← Research orientation	0.501	0.176	0.636	-
Attributed usefulness of research	<← Research orientation	0.717	0.547	1.005	≤0.001
Perceived unbiased nature of research	<← Research orientation	0.442	0.251	0.607	≤0.001
Research orientation	<← Age	0.186	-0.066	0.393	0.031
Interest in research courses	<← Research orientation	0.383	0.153	0.527	≤0.001
Interest in research courses	<← Fear of research courses	-0.395	-0.490	-0.252	≤0.001
Interest in research courses	<← Entry qualification: specialised baccalaureate	-0.115	-0.240	-0.023	0.042

Note: GFI = 0.968, AGFI = 0.941; CMIN/df = 1.304; SRMR = 0.0682; RMSEA = 0.035.

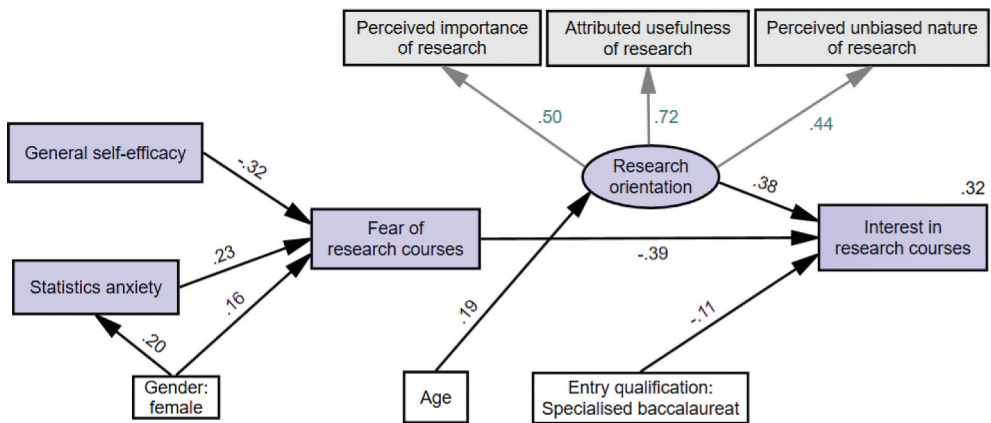


Figure 2. Path model explaining student's interest in research courses entering a BSW programme of a university in Switzerland (N = 244). Note: GFI = 0.968, AGFI = 0.941; CMIN/df = 1.304; SRMR = 0.0682; RMSEA = 0.035.

percentage of variance explained in the dependent variable. Further, model fit was slightly better in the Swiss sample.

Discussion

This study sought to assess students' attitudes towards research courses at the time of entering a higher education institution in Australia and in Switzerland and to identify predictors of entering students' interest in research-related coursework. Further, it explored commonalities in the causal paths to students' interest in research courses. Findings from both student groups revealed considerable variation in students' interest in research courses, with a significant portion of students reporting elevated levels of interest. This supports Secret et al.'s (2003) findings that social work students' initial attitudes towards research are complex, and that many have a favourable orientation towards research courses. At the same time, student responses in this study confirmed the prevalence of fear in relation to research courses, previously identified by a range of studies in the USA, Canada and Switzerland (Bolin et al., 2012; Einbinder, 2014; Gredig & Bartelsen-Raemy, 2018; Green et al., 2001; Maschi et al., 2007; Morgenshtern et al., 2011; Secret et al., 2003).

For students in both groups, fear directly predicted their level of interest in research courses, with higher levels of fear associated with lower levels of interest. This supported Gredig and Bartelsen-Raemy's (2018) finding that fear is an important driver of readiness and openness to engage with research-related curricular content. The hypothesis that fear is predicted by students' statistics anxiety and self-efficacy was also supported for both student groups.

Contrary to expectations, in our sample, students entering the Australian programme reported significantly lower levels of interest in research courses, and significantly higher levels of fear—including higher levels of statistics anxiety—than students entering the Swiss programme. However, they did report significantly higher levels of research orientation than students in the Swiss programme. Another surprising finding was

that, in contrast to our hypothesis and previous findings (Gredig & Bartelsen-Raemy, 2018), this study did not find evidence to support the hypothesis that research orientation is determined by fear of research courses. However, in both groups in our sample, students' fear of research courses and research orientation did predict students' level of interest in research courses.

Interestingly, despite the contextual differences between the two cohorts, the causal paths to entrant students' interest in research courses were analogue in both student groups. This suggests that the predictors and their interrelations considered in the hypothesised model seem not to be specific for or unique to students enrolled in a particular programme, university or even country. Thus, it seems the underlying dynamic determining entrant BSW students' interest in research courses is common among students in various contexts.

The finding that Australian students had higher levels of research orientation than Swiss students is interesting in light of the different educational contexts discussed earlier. As mentioned, students entering the Swiss programme under consideration must have had a minimum of six months work experience in a social work field prior to commencing their studies, while students entering the Australian programme are not required to have had any prior work experience in human services. Although neither cohort had been exposed to programme content and teacher expectations at the time of data collection, the work experience of the Swiss students may in some way have exposed them to the views of social work practitioners regarding training, degrees and attitudes towards research use in practice (for knowledge utilisation see, for example, Fellmann, 2016). Given the relatively recent establishment of social work in the tertiary education, the diversity of human services staff and the remaining critiques of the 'academisation' of vocations in Switzerland, it is likely that practitioners' views may reflect the prevailing negative perceptions towards research in social work highlighted in the broader literature (e.g., Gray et al., 2009). Without prior exposure to alternative discourses, students may uncritically accept these sceptical—and to some extent also dismissive—views regarding the importance and usefulness of scientific knowledge for practice.

This may contrast with the experience of students entering the Australian programme. While research on social workers' use of research generally conveys a pessimistic outlook (Baker & Ritchey, 2009, p. 377), in Australia, Gray et al. found that social workers are well-disposed towards evidence-based practice, with 'over 80% regarding evidence-based practice as useful for social work and a means to improve client care' (Gray et al., 2009, p. 35). Based on this, it is reasonable to conclude that social work students in Australia among those a relatively high number have had personal and/or professional exposure to social work prior to studying (Byrne, 2017) may have a relatively high likelihood of experiencing positive perceptions of the importance and usefulness of research on social work practice.

When one considers the potential of practice perceptions to impact student research orientation, decisions about the placement of research courses within a social work programme take on greater significance. From this perspective, it may be beneficial to include research courses early in a programme, *before* students have received repeated exposure to practice settings. In this way, research is affirmed as the 'bread and butter' of social work, rather than the 'icing on the cake' (Lorenz, 2003, p. 12). In the Swiss programme, the curriculum introduces research and research skills to students from

the beginning of their studies, and the (conceptual and instrumental) use of research findings is framed as a foundational component of social work practice. However, in the Australian programme, while teaching staff regularly highlight the relevance and importance of research for practice, students are not formally introduced to research and research skills until their third year of study, immediately following on from the completion of a 70-day field placement. While it may be argued that the positive research orientation of Australian social workers makes this less of an imperative, many students in the Australian programme are placed in human services organisations that do not employ accredited social workers. Although these students are provided with an external social work-accredited supervisor, in their day-to-day practice, they observe the attitudes and behaviours of workers who do not necessarily share the high level of social work support for evidence-based practice identified by Gray et al. (2014). Thus, by the time students in the Australian cohort commence their research course, the conditions which influenced their responses in this study will have changed, and the potential of these changes to impact on their research orientation must be considered. From this perspective, it is worth considering the conscious placement of research courses at the beginning of social work programmes in order to make maximum use of the openness of students to research courses at the commencement of their studies.

A further finding of interest in this study was the influence of age and gender on students' attitudes towards research courses. In the Australian group, older age was associated with higher levels of interest in research courses, and also higher levels of fear. Among the Swiss sample, older age was associated with higher levels of research orientation. Although gender was not a significant factor influencing attitudes towards research in the Australian sample, female gender was a predictor of statistics anxiety and fear of research courses in the Swiss group. These findings take on greater importance when one considers that both the Australian and the Swiss programme typically include a majority of female students and a considerable proportion of mature students.

Although this study includes respondents from two universities in different contexts, the sample size is rather small and generalizations must be made with caution. Further, the scales used to measure research orientation resulted in unsatisfactory reliability scores. The weak internal consistency of the measures in this study can be attributed partly to the specificities of the respondents. In contrast to other studies, the respondents had not yet been exposed to the programme content and the teachers' expectations. It seems likely that their views on the importance and usefulness of research for social work practice were not yet clearly formed. However, it seems that this flaw has been observed in various prior studies that used these measures to capture research orientation. This limitation appear to be inherent to the measures (Gregory, 2010) rather than due to our study population. For future research, we suggest using alternative measures.

This study assessed social work students' attitudes towards research courses. It affirmed, to some extent, the observations of faculty members that some students have a certain apprehension regarding research courses. However, it also demonstrated that the students in our samples obtained elevated mean scores of interest in research courses. Further, the study identified a set of predictor variables that influenced the reported interest in research courses. These findings contribute to a more 'accurate and comprehensive' (Secret et al.,

2003, p. 412) understanding of the underlying dynamics among students of the universities under investigation, and may be useful for informing the future development and delivery of research-related courses. Further qualitative research could contribute to a more comprehensive and nuanced understanding of these dynamics. It is worth noting that this study was the first to assess the attitudes towards research courses of social work students enrolled in BSW programmes in two countries, i.e. Australia and Switzerland. The findings support the assumption that the major dynamics underlying entrant BSW students' interest in research courses might be robust across contexts. With the necessary caution, this suggests that the predictor model tested could form a cornerstone for a global model of predictors of research interest among students entering BSW programmes.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

- Australian Association of Social Workers. (2015). *Australian social work education and accreditation standards 2012 V1.4*.
- Baird, S. L. (2016). Conceptualizing anxiety among social work students: implications for social work education. *Social Work Education*, 35(6), 719–732. <https://doi.org/10.1080/02615479.2016.1184639>
- Baker, L. R., & Ritchey, F. J. (2009). Assessing practitioner's knowledge of evaluation: Initial psychometrics of the practice evaluation knowledge scale. *Journal of Evidence-based Social Work*, 6(4), 376–389. <https://doi.org/10.1080/15433710902911097>

- Berger, R. (2002). Teaching research in practice courses. *Social Work Education*, 21(3), 347–358. <https://doi.org/10.1080/02615470220136911>
- Blakemore, T., & Howard, A. (2015). Engaging undergraduate social work students in research through experience-based learning. *Social Work Education*, 34(7), 861–880. <https://doi.org/10.1080/02615479.2015.1065809>
- Bolen, R. M. (2006). Utilizing web-based databases to introduce social work content in research statistics courses. *Social Work Education*, 25(1), 17–27. <https://doi.org/10.1080/02615470500477805>
- Bolin, B. L., Lee, K. H., GlenMaye, L. F., & Yoon, D. (2012). Impact of research orientation on attitudes toward research of social work students. *Journal of Social Work Education*, 48(2), 223–243. <https://doi.org/10.5175/JSWE.2012.200900120>
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.
- Butler, I. (2003). Doing good research and doing it well: Ethical awareness and the production of social work research. *Social Work Education*, 22(1), 19–30. <https://doi.org/10.1080/02615470309126>
- Byrne, N. (2017). Social work students' professional and personal exposure to social work: An Australian experience. *European Journal of Social Work*, 20(4), 1–10. <https://doi.org/10.1080/13691457.2017.1399254>
- Cha, T., Kuo, E., & Marsh, J. C. (2006). Useful knowledge for social work practice. *Social Work & Society*, 4(1), 111–122. <http://ejournals.bib.uni-wuppertal.de/index.php/sws/article/view/180/240>
- Cruise, R. J., Cash, R. W., & Colton, D. L. (1985) Development and validation of an instrument to measure statistical anxiety. *Paper presented at the proceedings of the American statistical association, Washington, D. C.*
- Davis, A. (2008). *Celebrating 100 years of social work*. Retrieved March 15, 2012, from <http://www.birmingham.ac.uk/Documents/college-social-sciences/social-policy/IASS/100-years-of-social-work.pdf>
- EDK/FDK. (1999). *Profil der Fachhochschulen für Soziale Arbeit*. Schweizerische Konferenz der kantonalen Erziehungsdirektoren und Schweizerische Konferenz der kantonalen Fürsorgedirektoren.
- Einbinder, S. D. (2014). Reducing research anxiety among MSW students. *Journal of Teaching in Social Work*, 34(1), 2–16. <https://doi.org/10.1080/08841233.2013.863263>
- Epstein, I. (1987). Pedagogy of the preturbed. *Journal of Teaching in Social Work*, 1(1), 71–89. https://doi.org/10.1300/J067v01n01_06
- Estabrooks, C. A., Derksen, L., Winther, C., Lavis, J. N., Scott, S. D., Wallin, L., & Profetto-McGrath, J. (2008). The intellectual structure and substance of the knowledge utilization field: A longitudinal author co-citation analysis, 1945 to 2004. *Implementation Science*, 3(1), 49. <https://doi.org/10.1186/1748-5908-3-49>
- Fellmann, L. (2016). Rezeption von wissenschaftlichem Wissen in der Kinder- und Jugendhilfe. Eine quantitative Studie über den Einfluss von organisationalen und individuellen Determinanten auf die Häufigkeit der Rezeption von wissenschaftlichem Wissen. *Neue Praxis*, 46(3), 228–238. <https://www.neue-praxis-shop.de/np/16-3/fellmann>
- Forté, J. A. (1995). Teaching Statistics without Sadistics. *Journal of Social Work Education*, 31(2), 204–218. <https://doi.org/10.1080/10437797.1995.10672258>
- Gray, M., Joy, E., Plath, D., & Webb, S. A. (2014). Opinions about evidence: A study of social workers' attitudes towards evidence-based practice. *Journal of Social Work*, 14(1), 23–40. <https://doi.org/10.1177/1468017313475555>
- Gray, M., Plath, D., & Webb, S. (2009). *Evidence-based social work: A critical stance*. Routledge.
- Gredig, D., & Marsh, J. C. (2010). Improving intervention and practice. In I. Shaw, K. Briar-Lawson, J. Orme, et al. (Eds.), *Handbook of social work research* (pp. 64–82). Sage Publications.
- Gredig, D., & Goldberg, D. (2010). Soziale Arbeit in der Schweiz. In W. Thole (Ed.), *Grundriss Soziale Arbeit. Ein einführendes Handbuch* (3 ed., pp. 403–424). VS Verlag.

- Gredig, D., & Bartelsen-Raemy, A. (2018). Exploring social work students' attitudes toward research courses: Predictors of interest in research-related courses among first year students enrolled in a bachelor's programme in Switzerland. *Social Work Education*, 37(2), 190–208. <https://doi.org/10.1080/02615479.2017.1389880>
- Green, R. G., Bretzin, A., Leininger, C., et al (2001). Research learning attributes of graduate students in social work, psychology, and business. *Journal of Social Work Education*, 37(2), 333–341. <https://doi.org/10.1080/10437797.2001.10779058>
- Gregory, V. L. (2010). Gregory research beliefs scale: Factor structure and internal consistency. *Research on Social Work Practice*, 20(6), 641–650. <https://doi.org/10.1177/1049731509353049>
- Hanna, D., Shevlin, M., & Dempster, M. (2008). The structure of the statistics anxiety rating scale: A confirmatory factor analysis using UK psychology students. *Personality and Individual Differences*, 45(1), 68–74. <https://doi.org/10.1016/j.paid.2008.02.021>
- Harder, J. (2010). Overcoming MSW students' reluctance to engage in research. *Journal of Teaching in Social Work*, 30(2), 195–209. <https://doi.org/10.1080/08841231003705404>
- Healy, K., & Lonne, B. (2010). *The social work and human services workforce: Report from a national study of education, training and workforce needs*. Australian Learning and Teaching Council.
- Healy, K., & Meagher, G. (2004). The reprofessionalization of social work: Collaborative approaches for achieving professional recognition. *The British Journal of Social Work*, 34(2), 243–260. <https://doi.org/10.1093/bjsw/bch024>
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60. https://issuu.com/academic-conferences.org/docs/ejbrm-volume6-issue1-article183?mode=a_p
- Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. <https://doi.org/10.1037/1082-989X.3.4.424>
- IASSW&IFSW. (2004) *Global standards for the education and training of the social work profession*. IASSW, IFSW. <http://www.iassw-aiets.org/global-standards-for-social-work-education-and-training/>
- Institut für Wirtschaftsstudien Basel. (2016). *Fachkräfte- und Bildungsbedarf für soziale Berufe in ausgewählten Arbeitsfeldern des Sozialbereichs*. SAVOIRSOCIAL.
- Jacobson, M., & Goheen, A. (2006). Engaging students in research: A Participatory BSW program evaluation. *Journal of Baccalaureate Social Work*, 12(1), 87–104. <https://doi.org/10.18084/1084-7219.12.1.87>
- Jerusalem, M., & Schwarzer, R. (oJ) *Allgemeine Selbstwirksamkeitserwartung*. Available at: <http://userpage.fu-berlin.de/~health/germscal.htm>.
- Kapp, S. A. (2006). Bringing the agency to the classroom: Using service-learning to teach research to BSW students. *Journal of Baccalaureate Social Work*, 12(1), 56–70. <https://doi.org/10.18084/1084-7219.12.1.56>
- Kirk, S. A., & Rosenblatt, A. (1981). Research knowledge and orientation among social work students. In H. Briar, H. Weissman, & A. Rubin (Eds.), *Research utilization in social work education* (pp. 29–39). Council on Social Work Education.
- Knee, R. T. (2002). Can service learning enhance student understanding of social work research? *Journal of Teaching in Social Work*, 22(1–2), 213–225. https://doi.org/10.1300/J067v22n01_14
- Krummenacher, J. (2018) Die Fachhochschulen sind Elfenbeintürme geworden. *Neue Züricher Zeitung*. Zürich.
- Lazar, A. (1991). Faculty, practitioner, and student attitudes toward research. *Journal of Social Work Education*, 27(1), 34–40. <https://doi.org/10.1080/10437797.1991.10672167>
- Lorenz, W. (2003). European experiences in teaching social work research. *Social Work Education*, 22(1), 7–18. <https://doi.org/https://doi.org/10.1080/02615470309133>
- Maschi, T., Bradley, C., Youdin, R., R., Killian, M. L., Cleaveland, C., & Barbera, R. A. (2007). Social work students and the research process: Exploring the thinking, feeling, and doing of research. *Journal of Baccalaureate Social Work*, 13(1), 1–12. <https://doi.org/10.18084/1084-7219.13.1.1>

- Maschi, T., Wells, M., Yoder Slater, G., MacMillan, T., & Ristow, J. (2013). Social work students' research-related anxiety and self-efficacy: Research instructors' perceptions and teaching innovations. *Social Work Education, 32*(6), 800–817. <https://doi.org/10.1080/02615479.2012.695343>
- Montcalm, D. M. (1999). Applying bandura's theory of self-efficacy to the teaching of research. *Journal of Teaching in Social Work, 19*(1–2), 93–107. https://doi.org/10.1300/J067v19n01_08
- Morgenshtern, M., Freymond, N., Agyapong, S., et al. (2011). Graduate social work students' attitudes toward research: Problems and prospects. *Journal of Teaching in Social Work, 31*(5), 552–568. <https://doi.org/10.1080/08841233.2011.615287>
- Pope, N. D., Rollins, L., Chaumba, J., & Risler, E. (2011). Evidence-based practice knowledge and utilization among social workers. *Journal of Evidence-Based Social Work, 8*(4), 349–368. <https://doi.org/10.1080/15433710903269149>
- Schwarzer, R., & Jerusalem, M. (ND) *The general self-efficacy scale*. <http://userpage.fu-berlin.de/~health/engscal.htm>
- Secret, M., Ford, J., & Rompf, E. L. (2003). Undergraduate research courses. *Journal of Social Work Education, 39*(3), 411–422. <https://doi.org/10.1080/10437797.2003.10779146>
- Ullman, J. B. (2001). Structural equation modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (4th ed. pp. 653–771). Allyn & Bacon.
- Widmer, R. (2018) *Kritik an Fachhochschulen. Immer mehr Forschung statt Handwerk*. Schweizer Radio und Fernsehen (SRF). <https://www.srf.ch/news/schweiz/kritik-an-fachhochschulen-immer-mehr-forschung-statt-handwerk>.