



Research paper

The role of motivations and perceptions on the retention of inservice teachers

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HIGHLIGHTS

- Motivational patterns of inservice teachers are comparable to reported patterns from preservice teachers.
- Motivation is supported by teachers' self-concept, beliefs and capabilities.
- Motivation is undermined by social perceptions of teaching as low social status.
- Motivation is undermined by employment practices that erode teachers' self-concept.
- Extrinsic, intrinsic and altruistic motivators are all relevant to retention.

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ABSTRACT

This article addresses the characteristics, motivations and perceptions of teachers regarding retention. The participants were practicing teachers in Australia. The survey included the Factors Influencing Teaching Choice (FIT-Choice) scale, previously used with preservice teachers. The results show that: i) teacher motivations are related to self-perceptions in teaching children/adolescents in the community, ii) threatened by negative social perceptions, and iii) influenced by characteristics such as gender. It is concluded that retention may be undermined by employment practices and social perceptions that erode a teacher's self-concept. Outcomes inform policy for improving employment practices for the retention of a diverse teaching workforce.

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1. Introduction

Internationally, there is a recognised need for highly skilled teachers capable of equipping students with 21st century knowledge and skills. At the same time, there are growing concerns about the status of teaching and the recruitment and retention of suitable teachers in a context of global education reform and intense social and technological change. Increasingly, questions of recruitment and who enters teaching have become matters of intense research and policy interest internationally (Craven et al., 2014; Gore, Holmes, Smith, & Fray, 2015; UNESCO Institute for Statistics, 2016; Watt & Richardson, 2012). Less attention has been given to teacher retention. Our focus is therefore on motivations to continue

in teaching as a key factor that supports retention in the profession.

In this article, first we draw on scholarly literature to examine teacher retention and motivations for teaching, and to consider the relationship between them. Second, we report on the application with registered teachers of the Factors Influencing Teaching Choice (FIT-Choice) framework and scale (Richardson & Watt, 2006; Watt & Richardson, 2007, 2012), which measures teachers' motivations and perceptions. At the time of writing, the FIT-Choice scale had not been applied to inservice teachers. The reported results look at the goodness of fit of FIT-Choice scale with inservice teachers followed by statistical analyses for all teachers and by gender. In the interests of space, results for the influence of gender on motivations and perceptions are presented. Readers interested in analysis across a range of contextual and demographic factors are referred to the full report (Wyatt-Smith et al., 2017). Third, we argue that the relationship between teacher motivation and retention merits further investigation through sustained longitudinal research that takes

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account of contextual and individual factors that may influence motivation towards retention. In doing so, we are responding to the following research questions that formed part of the larger study:

- What is applicability of the FIT-Choice scale to the selected cohort of inservice teachers?
- What does the FIT-Choice scale show about the motivations and perceptions of inservice teachers?
- Are there identifiable differences in motivations and perceptions of inservice teachers by gender?

The recruitment and retention of qualified teachers is an area of growing international concern (UNESCO Institute for Statistics, 2016). This is relevant in a wide range of disciplines, including science, technology, English and other language studies, and learning disabilities, which are increasingly being staffed by a group referred to in the literature as 'out-of-field teachers' or teachers working outside of their field (Du Plessis, 2017). The Australian Council for Educational Research has predicted increasing teaching workforce needs across the Australian context with Queensland alone needing an additional 443 class teachers every year from 2011 to 2020 (Weldon, 2015). In Queensland,¹ more than half of the population is sparsely distributed across rural and remote locations. The widely spread population intensifies issues with providing appropriately qualified teachers and this is played out in employment practices such as a high reliance on out-of-field and early career teachers across rural and remote locations and reliance on short-term employment contracts. These actions are in addition to the practice of granting 'permission to teach' to preservice teachers in hard to staff subjects and locations. It was in this context that the Queensland College of Teachers (QCT) commissioned a one-year survey study undertaken in the Australian context into teachers' employment opportunities and intentions, and motivations and perceptions of teaching, with participants to include teachers registered in Queensland. This investigation built on a preceding literature review of factors that influence the choice of teaching as a career (Fray & Gore, 2018; Gore et al., 2015), also undertaken for the QCT. The larger study aimed to establish evidence about the motivations and perceptions of teachers active in the profession with the intent of applying this to understanding implications of and considering strategies for recruiting and retaining teachers.

1.1. Teacher retention

Issues currently being experienced with maintaining a teaching workforce are two-fold. The literature discusses: i) declining numbers of candidates who select teaching as a career of choice (Frei, Berweger, & Buschor, 2017; Ingvarson et al., 2014); and ii) problems with retaining teachers in the profession (Day, Sammons, Stobart, & Gu, 2007; Howes & Goodman-Delahunty, 2015; Weldon, 2015). While the emerging pattern of reduced applicants to initial teacher education is of significant concern, here we focus on motivations to *continue* in teaching rather than to *enter*, because, relative to the entry issue, it is an under researched question. The focus on inservice teachers' motivations as applied in this study is contextualised by the issues of retention and attrition of teachers.

Concerns about teacher retention are increasingly being evidenced by data of teacher attrition. Reports of attrition rates (Table 1) vary considerably across international contexts. The data

show that teacher retention is of international significance for policymakers in workforce planning. Research has identified a range of reasons for attrition including: a) school factors, including organisational culture, social relations and professional support; b) working conditions, including salary, resourcing and advancement; c) student factors, including learning needs, engagement and behaviour; and d) teacher factors, including professional identity, commitment, self-efficacy and resilience to burnout and stress (Den Brok, Wubbels, & Van Tartwijk, 2017; Ewing & Manuel, 2005; Hong, 2010; Ingersoll, 2001; McInerney, Ganotice, King, Marsh, & Morin, 2015). The commonality of these reasons is highlighted across contexts, even in those places with significantly lower attrition. Yet, the differences reported point to the influence of context on the reasons for attrition. For example, in the Netherlands the role of self-efficacy of teachers with higher qualifications and proven competence is identified (Den Brok et al., 2017), while in Hong Kong the high social regard and remuneration for teaching is noted (McInerney et al., 2015). The influence of context on retention is important to this study given the issues of population sparsity and employment practices in Queensland, as described above.

Governments are increasingly aware of changes in the teaching workforce, historically recognised as stable (Smethem, 2007). While only limited studies have reported differences in attrition patterns, variations have been noted for males and females, with men more likely to leave teaching because of working conditions (Den Brok et al., 2017). This contributed to the selection of gender as an important consideration in understanding motivations and perceptions of inservice teachers and the potential relationship to retention resulting in the selected focus of the third research question. Internationally, teacher demand and supply estimation are now priorities in many education departments (Lamb, Jackson, Walstab, & Huo, 2015). There has also been growth in research into the ongoing motivations of teachers remaining in the profession (Ashiedu & Scott-Ladd, 2012; Day et al., 2007; Worth, Lynch, Hillary, Rennie, & Andrade, 2018). Across this research, understanding teachers' motivations to enter teaching as either a first or subsequent career and their motivations to remain in the profession are shown to be important to teacher retention.

1.2. Motivations for Teaching

Internationally, there has been significant and continuing research activity into the motivations that underpin the selection of teaching as a career. Influences that motivate individuals towards teaching are many and complex (Gore et al., 2015; Heinz, 2015). Across studies, there is evidence of similarities in the factors that motivate teachers towards the initial and ongoing choice of teaching. Motivations for teaching are typically categorised around conceptions of intrinsic, extrinsic and altruistic motivations (Gore et al., 2015; Heinz, 2015; Watt et al., 2012). The identification of these categories dates back to at least the 1960s, yet the identification of and distinctions between these categories of motivation is theoretically inconsistent (Brookhart & Freeman, 1992; Heinz, 2015). While noting this, the utility of these categories lies in distinguishing between personal satisfaction and interest as *intrinsic* motivations, social responsiveness as an *altruistic* motivation, and time and financial benefits as *extrinsic* motivations.

The FIT-Choice framework (Watt & Richardson, 2007) has coalesced existing research in motivation for choosing teaching into a comprehensive theoretical model. This framework draws together the complexity of factors that interact in teacher motivation and enables the identification of motivational patterns (Watt et al., 2012). It includes the *Socialisation Influences* surrounding choosing and remaining in teaching, the *Intrinsic Value* of teaching

¹ Queensland is one of eight states and territories in Australia. It is the sixth largest state in the world at 1.73 million km², with a population of 4.9 million with most outside of the urbanised south-east corner.

Table 1
Reported teacher attrition rates.

Country	Reported attrition	Source
Hong Kong	4.1–5.6%	McInerney et al. (2015)
Netherlands	15% (beginning teachers)	Den Brok et al., 2017
USA	between 30% and 50%	Hong, 2010; Ingersoll, 2001
UK	50% (after 5 years)	Espinoza (2015)
Australia	30–40% (within 5 years)	Ewing & Manuel, 2005; Milburn, 2011

both socially and personally, and *Perceptions* of personal abilities or efficacy, and the costs and benefits of teaching. As such, the FIT-Choice scale combines motivations with perceptions in developing a holistic model of factors that underpin the choice of teaching as a career. For the full list of factors included in the scale, see [Tables 2 and 3](#) below.

The framework provides more nuanced understandings of the roles and combinations of intrinsic, altruistic and extrinsic motivations in teaching. For example, teacher self-concept ([Klassen, Durksen, & Tze, 2014](#)), is integrated across multiple factors in the FIT-Choice scale in the use of questions related to the respondent's perceived skills, abilities, interest and confidence in teaching

Table 2
Final CFA factor loadings and Cronbach's alpha (α) on motivation factors.

Motivation factors	Cronbach's alpha (α)	Factor loadings
<i>Teaching ability</i>	0.83	0.83
B5 I have the qualities of a good teacher		0.88
B19 I have good teaching skills		0.70
B43 Teaching is a career suited to my abilities		
<i>Intrinsic career value</i>	0.82	0.81
B1 I am interested in teaching		0.87
B12 I like teaching		
<i>Fallback career</i>	0.66	0.58
B35 I was not accepted into my first-choice career		0.85
B48 I chose teaching as a last-resort career		
<i>Job security</i>	0.84	0.73
B14 Teaching offers a steady career path		0.84
B27 Teaching provides a reliable income		0.83
B38 Teaching is a secure job		
<i>Time for family</i>	0.79	0.61
B4 As a teacher I have lengthy holidays		0.75
B16 Teaching hours fit with the responsibilities of having a family		0.93
B29 School holidays fit in with family commitments		
<i>Job transferability</i>	0.68	0.56
B8 Teaching is a useful job for me to have when travelling		0.69
B22 A teaching qualification is recognised everywhere		0.66
B45 A teaching job allows me to choose where I wish to live		
<i>Shape future of children/adolescents</i>	0.90	0.84
B9 Teaching allows me to shape child/adolescent values		0.87
B23 Teaching allows me to influence the next generation		0.88
B53 Teaching allows me to have an impact on children/adolescents		
<i>Enhance social equity</i>	0.91	0.86
B36 Teaching allows me to raise the ambitions of underprivileged youth		0.91
B49 Teaching allows me to benefit the socially disadvantaged		0.86
B54 Teaching allows me to work against social disadvantage		
<i>Make social contribution</i>	0.85	0.81
B6 Teaching allows me to provide a service to society		0.80
B20 Teachers make a worthwhile social contribution		0.85
B31 Teaching enables me to 'give back' to society		
<i>Work with children/adolescents</i>	0.90	0.91
B13 I want a job that involves working with children/adolescents		0.86
B26 I want to work in a child/adolescent-centred environment		0.85
B37 I like working with children/adolescents		
<i>Prior teaching and learning experiences</i>	0.88	0.92
B17 I have had inspirational teachers		0.96
B30 I have had good teachers as role-models		0.66
B39 I have had positive learning experiences		
<i>Social influences</i>	0.84	0.76
B3 My friends think I should be a teacher		0.89
B24 My family think I should be a teacher		0.75
B40 People I've worked with think I should be a teacher		
<i>Subject interest</i>	0.89	0.86
I really enjoy the topics I teach		0.90
The subject/s that I teach, interest me deeply		0.80
I want to share my passion for my subject area/s		

(Tables 2 and 3). Furthermore, the framework differentiates between extrinsic motivators such as the influence of social status and the personal costs and benefits of teaching. The FIT-Choice scale is constructed from the theoretical framework, as described by Watt and Richardson (2007).

Studies using the FIT-Choice framework and scale show that there are strong similarities in the motivations of preservice teachers across international borders (Heinz, 2015; Watt et al., 2012). These converge around *Intrinsic Value*, described as interest and enjoyment in teaching; *Social Utility Value* referring to the social contribution of teaching, and *Self Perceptions* of teaching ability (Watt et al., 2012). However, some criticisms have been raised about the limitations of the scale to effectively distinguish variations in motivation based on individual's gender, religious and cultural identities (Gore et al., 2015; Klassen, Al-Dhafri, Hannok, & Betts, 2011).

The comparison of these studies also demonstrates variations in motivational patterns that highlight the significance of contextual influences on an individual's choice of teaching as a career (Gore et al., 2015; Heinz, 2015; Watt et al., 2012). A key observation across the applications of the FIT-Choice scale with preservice teachers is that individual preferences are influenced by factors relating to social, cultural, economic and political contexts (Gore et al., 2015). The explanations given in the studies confirm the interconnection between individual and contextual influences identified in studies that pre-dated FIT-Choice (Beijaard, Verloop, & Vermunt, 2000). Contextual differences that have been shown to influence motivation include: a) the approach to teacher certification, such as examination requirements (Watt et al., 2012); b) economic factors, including labour market forces and positive income potential (Kilinc, Watt, & Richardson, 2012; Lin, Shi, Wang, Zhang, & Hui, 2012); c) sociopolitical influences, such as the implications of values in egalitarian principles in Norway (Watt et al., 2012), and collectivism in China (Lin et al., 2012); d) working conditions in schools (Heinz, 2015; Watt et al., 2012); and e) cultural influences in an individual's sociocultural background (Klassen et al., 2011). While the significance of contextual influences has been identified, how these combine, add to, or offset one another has not been the subject of sustained long-term

research for preservice or inservice teachers to date.

The literature surrounding the FIT-Choice scale acknowledges that teachers' individual motivations for teaching are 'influenced by a variety of contextual as well as individual factors' (Heinz, 2015, p. 279). This foregrounds the need to establish evidence across both of these categories of factors in understanding teachers' motivations to enter and remain in teaching. Yet, given the relatively small number of studies involving inservice teachers, the influence of these factors on the ongoing motivation of teachers to remain in the profession is not well understood. As such, the current use of the FIT-Choice scale with registered teachers is particularly significant. There are certain conditions that influence success and failure in teaching and inform the motivations of teachers to continue in the profession. Examples include beliefs and values, gender, and professional ideals and real-world issues that influence their achievement (Den Brok et al., 2017; Lusty, 2013). As such, this study sought to move the focus from the motivations and perceptions of teachers on entering teaching to consider the individual and contextual factors surrounding the motivations and perceptions of teachers who are continuing in teaching. Within this paper, the selected focus on gender to exemplify individual factors was supported by issues identified with the retention of male teachers (Den Brok et al., 2017) coupled with evidence of the gender imbalance in the register of teachers in Queensland (Appendix A).

2. Methodology and methods

The project from which this article has been derived was a one-year survey study with the intention to develop an empirical evidence base to understand the individual and contextual factors surrounding inservice teachers' motivations and perceptions of teaching. Ethical clearance was obtained for the project through the university's Human Ethics Review Committee. All participants were provided with a project information sheet and the first section of the survey included questions that covered active consent to participate. The following methodological processes were undertaken in response to the research questions, listed above, into the application of the FIT-Choice scale with inservice teachers to derive their motivations for and perceptions of teaching.

Table 3

Final CFA factor loadings and Cronbach's alpha (α) on perception factors.

Perception factors	Cronbach's alpha (α)	Factor loadings
<i>Expert career</i>	0.73	0.92
C10 Do you think teaching requires high levels of expert knowledge		0.63
C14 Do you think teachers need high levels of technical knowledge		
<i>High demand</i>	0.75	0.69
C2 Do you think teachers have a heavy workload		0.66
C7 Do you think teaching is emotionally demanding		0.78
C11 Do you think teaching is hard work		
<i>Social status</i>	0.91	0.80
C4 Do you believe teachers are perceived as professionals		0.88
C8 Do you believe teaching is perceived as a high-status occupation		0.87
C12 Do you believe teaching is a well-respected career		0.52
C5 Do you think teachers have high morale		0.89
C9 Do you think teachers feel valued by society		0.85
C13 Do you think teachers feel their occupation has high social status		
<i>Salary</i>	0.95	0.92
C1 Do you think teaching is well paid		0.97
C3 Do you think teachers earn a good salary		
<i>Social dissuasion</i>	0.64	0.58
D2 Are you being encouraged to pursue careers other than teaching		0.50
D4 Do others tell you teaching was not a good career choice		0.79
D6 Do others influence you to consider careers other than teaching		
<i>Satisfaction with choice</i>	0.93	0.96
D3 How satisfied are you with your choice of being a teacher		0.91
D5 How happy are you with your decision to be a teacher		

2.1. Research design

The study used a survey design to investigate the individual and contextual factors surrounding the motivations and perceptions of teachers registered in Queensland. The approach selected was to design a purpose-built survey tool that collected data about the individual, teaching experience, career intentions, and motivations and perceptions of teaching. In relation to motivations and perceptions, open-ended questions were included alongside the FIT-Choice scale. This generated quantitative and qualitative data of teachers' motivations. This paper is reporting on the statistical data collected against the FIT-Choice scale.

2.2. Participants

The target population for the survey was all currently registered Queensland teachers with an initial registration date between 2006 and 2016 ($n = 38\,560$). From this target population, a sample of one in three teachers was randomly selected from the QCT's electronic database to participate in the study ($n = 12\,854$). The minimum sample size required to achieve a 95% confidence level and 5% margin of error was calculated as 381 participants. Five participants who indicated they had not taught since gaining their qualification were removed to ensure that all responses were from participants who had taught or were still teaching. The final sample was 1165 teachers, representing a return rate of 9%. The finalised sample meets the requirement of the minimum sample size to ensure adequate statistical power. Further information about the demographics of the sample is provided in [Appendix A](#). This information was used to confirm that the sample was similar to the target population across factors including gender, culture, qualifications and employment sectors. The one limitation in sampling related to the category of age, which was identified as a consequence of random selection. Despite this limitation, the overall demographic distribution of the final cohort of participating inservice teachers was suitable for examining contextual issues, career pathways, and individual factors affecting the choice of teaching for teachers in the early career and mid-career phases.

2.3. Procedures

The full study used a survey tool divided into sections covering ethics for the study and four key constructs, including: i) teacher characteristics; ii) employment opportunities in teaching; iii) career choice and intentions, and iv) motivation and perception factors. The fourth construct of the survey used the full version of the FIT-Choice scale with the permission of the authors (© 2004, Helen M. G. Watt & Paul W. Richardson). The introductory stems to the motivation and perception items were modified to take into account implementation with inservice teachers. No other adjustments were made to the range and wording of the FIT-Choice items. The items were used as designed to test fitness for purpose of the scale with the target population of inservice teachers. The FIT-Choice items were included after questions about employment in teaching to contextualise the items in relation to respondent's work as a teacher rather than their initial motivations for choosing teaching.

The FIT-Choice scale measures individual motivations for, and perceptions about, teaching and satisfaction with choice. It

incorporates thirteen factors measuring underlying constructs around motivations, and six factors measuring perceptions and beliefs about teaching. For a full list of included factors, see [Tables 2 and 3](#). The ranked responses range from 1 (not at all) to 7 (extremely). The scale has been tested for validity and reliability ([Watt & Richardson, 2007](#)) and applied in a growing body of empirical studies to investigate the motivations and perceptions of preservice teachers on continents including Australia ([Richardson & Watt, 2006](#); [Watt & Richardson, 2007](#)), North America ([Lin et al., 2012](#)), Europe ([Fokkens-Bruinsma & Canrinus, 2012](#); [König & Rothland, 2012](#); [Watt et al., 2012](#)), and Asia ([Lin et al., 2012](#)).

The following analytic procedures were undertaken. First, the goodness of fit of the FIT-Choice scale with the selected cohort of teachers was completed. The goodness of fit was calculated to review the suitability of the use of the scale with the selected cohort of registered teachers, noting that prior studies using the FIT-Choice scale have focused on preservice teachers. Second, statistical analyses of the FIT-Choice motivation and perception factors were completed. In keeping with the determination to use the FIT-Choice scale as designed, noting adjustments above, the analysis and reporting includes all factors in the framework and scale. High correlations were observed between the three factors, Enhance social equity, Make social contributions, and Work with children/adolescents, all of which are part of the *Social Utility Value* outlined in the FIT-Choice framework. Reporting of these factors demonstrated the synergies between these different aspects of teachers' altruistic motivations.

The analyses included descriptive statistics for the ranking, mean and variation in responses across motivation and perception factors for the whole sample, and the use of MANOVA for testing statistical significance. MANOVA analysis was conducted on the motivation and perception factors to assess the implications of a range of demographic and employment factors. The results selected for discussion in this paper relate to gender as a factor noted as potentially relevant to issues of retention.

3. Results

Two components of the statistical analysis are reported here. These are: i) evidence of the goodness of fit of the FIT-Choice scale for the selected sample; and ii) statistics for the FIT-Choice motivation and perception factors for the sample and by gender. This selection seeks to demonstrate the relevance and usefulness of the FIT-Choice framework and scale as applied with inservice teachers and supports the critical review of implications for retention.

3.1. Goodness of fit of the FIT-Choice scale

To determine the goodness of fit of the FIT-Choice scale with the selected in-service teachers, Confirmatory Factor Analysis (CFA) and reliability analysis were performed for the motivation and perception factors. This ensured that each of the FIT-Choice constructs were well represented by the included items. The results of CFA and reliability analysis (Cronbach's alpha (α)) are provided ([Tables 2 and 3](#)). Cronbach's alpha has been reported for all factors, including the two-item factors, for consistency and as applied in previous studies using the scale with preservice teacher cohorts as synthesised by [Watt and Richardson \(2012\)](#). The use of Cronbach's alpha with two items has been shown to be an accurate estimate of

reliability (Eisinga, Grotenhuis, & Pelzer, 2013).

The analysis showed that the constructs had acceptable internal consistency after removing four weak items with a small factor loading (<0.5). These items were omitted from the model. They included: "I've always wanted to be a teacher"; "I was unsure of what career I wanted"; "Part-time teaching could allow more family time"; and "As a teacher I have a short working day". This resulted in higher scale reliabilities and better model fitting. For all factors, Cronbach's alpha (α) of over 0.6 was considered an indication of acceptable consistency. Across the motivation and perception factors, lowest internal consistency was noted in relation to fallback career ($\alpha = 0.66$) and social dissuasion ($\alpha = 0.64$) respectively. This was a consequence of higher variation in the factor loading for the individual items. It was identified that items with lower factor loadings were statements that may have more limited relevance for inservice teachers already established in teaching as a career. They included: "I was not accepted into my first-choice career"; "Are you being encouraged to pursue careers other than teaching"; and "Do others tell you teaching was not a good career choice".

The goodness of fit measures, after omission of the four items for the motivation and perception, are provided (Table 4). The measures indicate that the perception model fits the data better than the motivation model, as a higher CFI (TLI) and lower SRMR (RMSEA) indicates a better model fitting. Overall, the CFA model fitted data adequately after omitting the four items.

3.2. FIT-choice motivation factors

The results from the FIT-Choice scale including the mean score, standard deviation and ranking of motivation and perception factors are provided for the whole sample and by gender (Table 5). Details of the questions related to each motivation factor is found on Table 2. The top-three ranked motivation factors for all participants and for females were Intrinsic career value ($M = 6.2$; $SD = 1.1$), Teaching ability ($M = 6.0$; $SD = 1.0$) and Shape future of children/adolescents ($M = 5.9$; $SD = 1.3$). These factors were all highly rated with relatively low variance, indicating that respondents held consistent perspectives of the importance of these motivation factors. The similarity between the whole sample and females is unsurprising given that females represented 79.5% of respondents. In relation to the FIT-Choice framework, these factors cover the *Intrinsic value* of teaching as a career, *Self perceptions* of efficacy, and *Social utility value*. While the motivational pattern for female respondents is divergent, it is focused around intrinsic factors related to the value of teaching and personal capacity to contribute to teaching, supported by altruistic notions about contributing to children/adolescents.

The top-three ranked motivation factors for male respondents differed from the pattern for females. These factors were Intrinsic career value ($M = 6.0$; $SD = 1.2$), Teaching ability ($M = 5.9$; $SD = 1.0$) and Subject interest ($M = 5.8$; $SD = 1.2$). Again, the high rating and low variance in these factors showed that they were consistently

viewed as important. In the FIT-Choice framework, these factors cover the *Intrinsic value* of teaching as a career, and *Self perceptions* of efficacy and subject interest. The motivational pattern for males was more strongly focused, in comparison to females, around the intrinsic value of and personal capacity for teaching in a subject of personal interest.

The bottom-three ranked motivation factors were the same for both males and females. These were Fallback career (Female: $M = 1.5$; $SD = 1.1$; Male: $M = 1.8$; $SD = 1.3$), Social influences (Female: $M = 3.3$; $SD = 1.9$; Male: $M = 3.4$; $SD = 1.8$) and Job transferability (Female: $M = 3.8$; $SD = 1.6$; Male: $M = 3.8$; $SD = 1.6$). Within the FIT-Choice framework, the very low and consistent rating of teaching as a fallback career choice was an unsurprising outlier in relation to the motivation factors measured. The remaining two lowest-ranked factors cover the *Personal utility value* of the transferable skills of teaching and the *Socialisation influences* of the attitudes of family and friends. In contrast to *Fallback career*, these two factors were much closer to the middle of the scale (4) with higher variance. Whilst they were ranked lower than some others, these factors contribute to the overall motivational pattern for both male and female respondents.

Across all motivation factors measured, differences were noted in the mean scores for male and female respondents. Overall, the range of the means was smaller for males (4.2) than for females (4.7); where males typically scored the higher-ranked factors lower in comparison to females and the lower-ranked factors higher. The one anomaly to this pattern related to the factor Subject interest, which male respondents ranked higher (Male: 3rd; Female: 5th) with a higher mean (Male: $M = 5.8$; Female: $M = 5.7$). The findings that males rank subject interest higher suggests the importance of interest in the subject areas and topics of teaching for male respondents.

The overall MANOVA analysis of all motivation and perception factors together showed a statistically significant difference by gender ($F(55,1101) = 2.97$, $p < 0.001$). The overall amount of variance in motivation and perceptions ($\eta^2 = 1$ -Wilk's Lambda), accounted for by gender is 13% ($\eta^2 = 0.1293$). The MANOVA tests used to identify the significance of differences found seven factors significant at p -value < 0.05 , including two factors at p -value < 0.001 . The two most significantly different factors were the *Social utility values* of Shaping the future of children/adolescents and Working with children/adolescents. Both of these were ranked lower by males than females. This lends support to the finding in this study that female respondents were more motivated by opportunities to engage in teaching with children and young people than male respondents.

3.3. FIT-choice perception factors

The mean score, standard deviation and ranking of the perception factors are also provided for the whole sample and by gender (Table 5). Details of the questions for each perception factor are found in Table 3. While important differences were identified in

Table 4
Goodness of fit measures for motivation and perception factors.

GOF measures	Motivation	Perception
χ^2	2674.143 ($df = 551$, $p < 0.001$)	$\chi^2 = 457.474$ ($df = 120$, $p < 0.001$)
CFI	0.924	0.971
TLI	0.908	0.963
SRMR	0.059	0.040
RMSEA	0.058 (CI: 0.055–0.060)	0.049 (CI: 0.045–0.054)

Table 5
Motivation and Perception factors for the whole sample and by gender.

Rank	Motivations for teaching										Perceptions of teaching							
	Teaching ability	Intrinsic career value	Fallback career	Job security	Time family	Job transferability	Shape future of children/adolescents	Enhance social equity	Make social contribution	Work with adolescents	Prior teaching and learning experiences	Social influences	Subject interest	Expert career	High demand	Social status	Salary	Satisfaction with choice
1	13	6.2 (1.1)	1.6 (1.1)	5.2 (1.5)	10	4.1 (1.8)	3	9	4	6	7	12	5	2	1	5	4	3
2	1	6.0 (1.0)	1.5 (1.1)	5.2 (1.5)	11	3.8 (1.6)	5.9 (1.3)	4.9 (1.7)	5.8 (1.3)	5.5 (1.5)	5.3 (1.6)	3.3 (1.9)	5.8 (1.3)	5.7 (1.1)	6.5 (0.8)	3.5 (1.3)	3.9 (1.6)	5.6 (1.4)
Mean (m)		6.0	1.5	5.2	10.5	4.0	5.9	5.0	5.6	5.4	5.3	3.4	5.7	6.0	3.5	3.9	3.9	5.6
Standard Deviation (sd)		1.0	1.1	1.5	1.8	1.6	1.3	1.7	1.3	1.5	1.6	1.9	1.3	1.1	0.8	1.3	1.6	1.4
Gender																		
p-value	**	**	**	**	**	**	***	*	*	***	0.006	0.002	0.003	*	***	0.003	<0.001	<0.001
Effect size (η ²)	0.003	0.011	0.011	0.005	0.012	0.001	0.016	0.007	0.008	0.062	0.006	0.002	0.003	0.007	0.028	0.003	<0.001	<0.001
Female	2	1	13	8	10	11	3	9	4	6	7	12	5	2	1	5	4	3
Male	2	1	13	7	10	11	5	9	4	8	6	12	3	3	1	5	4	2
	6.0 (1.0)	6.2 (1.1)	1.5 (1.1)	5.2 (1.5)	4.1 (1.8)	3.8 (1.6)	5.9 (1.3)	5.0 (1.7)	5.9 (1.3)	5.7 (1.4)	5.3 (1.6)	3.3 (1.9)	5.7 (1.4)	5.8 (1.1)	6.6 (0.7)	3.5 (1.3)	3.9 (1.6)	5.6 (1.5)
	5.9 (1.0)	6.0 (1.2)	1.8 (1.3)	5.1 (1.6)	4.2 (1.8)	3.8 (1.6)	5.6 (1.4)	4.6 (1.8)	5.7 (1.4)	4.8 (1.7)	5.1 (1.6)	3.4 (1.8)	5.8 (1.2)	5.5 (1.2)	6.3 (0.9)	3.4 (1.3)	3.9 (1.6)	5.6 (1.4)

*p < 0.05 **p < 0.01 ***p < 0.001.
~Eta square, η² = 1-Wilk's Lambda.

Table 6
Correlation of perception factors.

Perception factors	Rank	M	SD	1	2	3	4	5
Expert career	2	5.7	1.1	-				
High demand	1	6.5	0.8	.46	-			
Social status	5	3.5	1.3	.08	-.09	-		
Salary	4	3.9	1.6	.09	-.05	.49	-	
Social dissuasion	6	2.9	1.5	-.02	.06	-.10	-.09	-
Satisfaction with choice	3	5.6	1.4	.33	.09	.35	.23	-.35

Note: Bold figures p < 0.05, Bold italic figures p < 0.001.

relation to motivation, the perception factors were more notable for the similarities between female and male respondents. The only difference in the ranking of perception factors was the switching of Expert career (Female: 2nd; Male: 3rd) with Satisfaction with choice (Female: 3rd; Male: 2nd). Overall, all participants perceived teaching as a High demand (M = 6.5; SD = 0.8) and Expert career (M = 5.7; SD = 1.1), with a heavy workload that is emotionally and intellectually demanding. There was also high Satisfaction with choice (M = 5.6; SD = 1.4) of teaching as a career. In contrast, the respondents reported relatively low ratings for the two social perception factors, Social status and Social dissuasion. This suggests participants' perceptions of teaching as negatively viewed by others.

The range of the means for the perception factors was smaller for males (3.3) than for females (3.7) and is evidenced by the lower ratings given to the higher-ranked factors. The lower mean for the top-ranked perception factor, High demand (Female: M = 6.6; Male: M = 6.3), was also statistically significant at p-value < 0.001. The female respondents perceived teaching as more demanding than their male counterparts, though for males and females, High demand was the top-ranked perception factor. As such, it is a difference of degree rather than of perception.

Given the similarities between males and females, the correlation coefficients of perception factors for the whole sample is useful for understanding the relationship between perceptions and retention. The correlation coefficients of perception factors are provided (Table 6).² These show that Task return, represented by Social status and Salary, is highly correlated to Satisfaction with choice. This indicates that teachers who perceived that teaching has a higher social status were more likely to perceive teaching as well paid and be more satisfied with their choice. By contrast, the Socialisation influence of Social dissuasion is negatively correlated to perceptions of Social status, Salary and Satisfaction with choice. This means that the teachers who scored Social dissuasion higher perceived teaching as not well paid and having a low social status. They were also less satisfied with their career choice. These patterns show how external factors, such as status and salary, might be related to satisfaction. These factors are, in turn, critical to the ongoing motivation and retention of teachers.

4. Discussion

This article has considered two key goals in using FIT-Choice with inservice teachers. First, establishing the applicability of the FIT-Choice framework and scale for use with registered teachers, as demonstrated above. Second, to interrogate the factors influencing these teachers' motivations and perceptions and to look for patterns of commonality and variation, using gender as an example of a potentially influential individual factor. The results suggest there is potential for developing differentiated approaches to recruitment and improving the status of the profession. However, a critical

reading of the outcomes of the project has also identified potentially concerning implications of employment practices on the motivations and perceptions of teachers and their retention in the profession. This is summarised in four key findings about teacher motivation, as follows.

4.1. Teacher motivations identified at entry continue into the profession

The results provided by the inservice teachers in Queensland were broadly consistent with reports of the use of the FIT-Choice Scale with preservice teachers across international contexts. First, the analysis shows appropriate goodness of fit for the FIT-Choice scale in this application with inservice teachers. Second, in terms of the rankings of motivation and perception factors, similarities were also evident with findings of previous studies with preservice teachers. The combination of high rankings for intrinsic and altruistic motivation factors is reflective of the rankings of these factors by preservice teachers in Australia (Watt & Richardson, 2007) and Western Europe (Berger & D'Ascoli, 2012; Fokkens-Bruinsma & Canrinus, 2012). Similarly, the rankings of perception factors were comparable to that of preservice teachers in Australia (Watt & Richardson, 2007) and in Europe and the United States (Berger & D'Ascoli, 2012; Fokkens-Bruinsma & Canrinus, 2012; Hennessy & Lynch, 2016; Jugović, Marušić, Ivanec, & Vidović, 2012; Lin et al., 2012).

The results highlight the ongoing multilayered and complex influences that motivate individuals in choosing and remaining in teaching as a career. The registered teachers responded positively to factors from across the entire FIT-Choice framework (mean greater than 4.0), with the exception of the extrinsic factors of the *Task return* of teaching and teaching as a *Fallback career*. The rankings of and correlations between factors showed that the motivations and perceptions of the inservice teachers included some unique characteristics, as described below.

4.2. Teacher motivation is strongly related to teachers' self-concept

Across the results provided above, a relationship between teachers' self-concept and motivation was identified. The FIT-Choice scale integrates teachers' self-concept, or beliefs about capabilities, across multiple factors all of which were ranked highly by the respondents.

Across both motivations and perceptions, the three factors with the highest means (greater than 6.0) were the *Task demand* of teaching as a high demand profession, the *Intrinsic value* of teaching as a career, and the *Self perception* of personal abilities for teaching (Table 5). These factors can be categorised as intrinsic motivators that place personal value on teaching as a challenging career choice and one's capability for, and success in, teaching. This pattern of motivation based in the intrinsic value of and personal capacity for teaching was evident for both male and female respondents and support previous findings that showed that some preservice teachers saw the demands of teaching as an incentive in choosing teaching (Richardson & Watt, 2006).

Teachers who were intrinsically interested in and enjoyed teaching were also shown to be motivated by altruistic values to provide service and benefits to children/adolescents and society at large. These altruistic motivators are represented in the FIT-Choice scale by the motivation factors of the *Social utility value*, including

Shaping the future of children/adolescents, Making a social contribution, and Working with children/adolescents. There were strong correlations of these altruistic factors to *Intrinsic career value*, including Shaping the future of children/adolescents, Making a social contribution, and Working with children/adolescents (Appendix B). These correlations provide support to and build upon the significance of teaching self-concept on the personal and social value of choosing teaching as a career.

4.3. Teacher motivation is weak in relation to external perceptions

The results of this study also highlight risks associated with the influence of external or social perceptions on the motivations of teachers. The extrinsic motivators represented across the FIT-Choice scale were all ranked poorly by the inservice teachers. Leaving aside *Fallback career*, the factors that fell below the mean of 4.0 covered the range of extrinsic factors, including the returns gained from the task of teaching in terms of Social status and Salary, the *Personal utility* of Job transferability, and the *Socialisation influences* of Social dissuasion and Social influences. Combined, these lower ranked factors demonstrate that factors related to extrinsic motivators and the influence of family and friends were ranked lower, as was also the pattern in previous studies with preservice teachers in the Australian context (Watt & Richardson, 2007). It would appear that the experience of teaching does not change teachers' perceptions of social attitudes towards the profession, monetary and other benefits from the profession.

The inservice teachers responded slightly more positively about remuneration than they did about socially held beliefs about teaching. This indicates that challenges stemming from negative perceptions of the nature and conditions of teaching are significant to teachers' ongoing motivations. It also points to the influence of public, political and media messaging on the interpersonal relationships that influence individual's career choices. The responses lend weight to concerns about the influence of perceptions of the status of teaching as a career and the challenge of attracting and retaining high performing candidates into teaching, given the damaging nature of ongoing perceived low social status.

4.4. Teacher motivation is influenced by individual factors, such as gender

The analysis of gender differences across the FIT-Choice scale demonstrated that variations are evident in the motivations and perceptions based on teachers' individual characteristics. The significantly higher proportion of female respondents was reflective of the proportion of females on the register in Queensland and, as expected, the pattern of female responses across both motivation and perception factors resembled the entire sample of respondents. The pattern of male responses varied from that for females and the difference between male and female responses was statistically significant for almost half of the motivation and perception factors.

First, an analysis of similarities and differences in the means and ranking of factors, as shown in the results, showed that the motivators of male teachers were the factors typically associated with an intrinsic motivation for teaching. These include positive teacher self-concept and interest in teaching and the subjects taught. The lower male means and ranking of altruistic factors across the *Social utility value* seem to indicate that these motivators were less significant for male respondents.

² The correlation coefficients for motivation factors are not discussed and are provided in Appendix B.

Second, there was a profile of overall lower responses from male respondents across most motivation and perception factors. The mean male response was lower for 11 of 19 factors, and the same for a further three factors. Of interest are the five factors where male responses showed means that were higher than females, thereby reversing the more typical pattern. These included the motivation factors of Fallback career, Time for family, Social influences, and Subject interest; and the perception factor of Social dissuasion. These factors indicate that male respondents may be more influenced by social factors and perceptions of teachers and teaching, and slightly more likely to have fallen into teaching as a career. The one factor that sits outside this pattern is that of Subject interest, which relates to the male respondents' enjoyment and passion for the subjects they are teaching.

Third, there were nine motivation and perception factors with significant differences between the male and female respondents with most rated lower by the male respondents. These included lower ratings of all four factors under *Social utility value* and both factors under *Task demand*. Males have provided very significant lower results for factors related to engagement with children/adolescents, and moderately significant lower results for factors relating to contributing to society. These indicate overall lower levels of motivation related to these altruistic factors. Additionally, the factors of High demand and Expert career were both scored lower by males, indicating that the male respondents viewed teaching as less demanding than their female counterparts. The remaining three factors with statistically significant differences were more diverse. Intrinsic career value that relates to the teachers liking for teaching was rated lower by male respondents. However, the satisfaction with choice of teaching was the same for males and females indicating that the moderately lower interest or liking for teaching did not seem to influence satisfaction with the choice of teaching. Time for family and Fallback career, as discussed above, were rated significantly higher by males. Male respondents higher rating of Time for family could be explained by their lower ratings for the *Task demands* of teaching.

It cannot be ascertained from this survey study whether these differences are a result of fundamentally different motivations for teaching or whether weaker male responses to the altruistic factors can be attributed to perceptions of teaching and masculinity. Further work needs to be done to consider how the retention of male teachers is influenced by the stronger intrinsic pattern of motivation based in personal efficacy and interest, and the influence of socially held perceptions of the feminisation of teaching. Equally, as only 0.2% of respondents selected a gender identity other than male or female, results for this group could not be reported. The implications of the diversity of gender identities also needs to be explored.

5. Conclusion

This article has reported on the relevance and usefulness of the FIT-Choice framework and scale within a survey study into why teachers chose teaching. Specifically, the study considered how understandings of the motivational patterns of teachers, both collectively and in relation to individual characteristics and contexts, might influence strategies for promoting the profession and retaining teachers. The strong influence of intrinsic and altruistic

motivators on the choice of teaching as a career is well documented across both historical and contemporary literature. The sample of registered teachers reported a combination of strong intrinsic supported by altruistic motivations for teaching. Yet, socially-held beliefs about teachers and teaching reinforced by political and social discourses have the potential to erode positive perceptions of the profession and influence the retention of teachers.

Strategies for retention may be seriously undermined by employment practices and social perceptions that erode teachers' self-concept. In Queensland where these teachers are registered and employed, increasing use of employment practices such as the casualisation of the early career phase and out-of-field teaching, as reported elsewhere, pose threats to teachers' sense of efficacy in and motivation for teaching (Du Plessis, 2017). The results herein indicate that employment practices need to take account of and promote teachers' self-concept across career stages in order to support teachers' intrinsic motivations for teaching.

Current employment practices for maintaining a teaching workforce appear to be reliant upon the capacity of individuals to maintain their personal intrinsic motivation in the face of significant external detractors. Expectations about and acceptance of extrinsic motivators as important factors in employment need to be considered in relation to the retention of a teaching workforce. The results suggest that salary incentives, in and of themselves, may be only part of the strategy to leverage improvement in perceptions of the status of the profession.

The analysis of patterns based on gender showed that there are important differences in the motivational patterns of teachers based on individual characteristics as measured by the FIT-Choice scale. This article has focused on gender as one example. Other individual characteristics and work-related factors were included in the full study. These motivational patterns could be examined further for implications for recruitment. It is likely that generic promotional campaigns and advertising for recruitment might not be the most productive. Rather, a more nuanced approach that considers both the complexity of motivational patterns and the differences evident in the motivations of different types of teachers is needed.

The limitations of the study related to the nature of the sample and the data analyses undertaken. First, the sample size was large enough to undertake a range of statistical analyses, yet the relatively low response rate means that the respondents were more likely to be motivated teachers and this could have skewed the responses towards being more positive. As such, the findings are useful for identifying motivational patterns for motivated and resilient teachers, but they might not represent patterns for less motivated teachers within the target cohort. Furthermore, while the sample was shown to be demographically representative of the whole register, this representativeness is not necessarily diverse.

Second, limitations in the data analyses selected must be acknowledged. This includes the potential for both true and spurious covariance being measured in the use of CFA and reliability analysis using Cronbach's alpha (α). Additionally, the low response rate from teachers who identify other than male or female effectively eliminated the possibility of including this group in the analysis of the data by gender. Consideration could also be given to modifying some aspects of the survey in relation to factors with high correlations and statements with limited applicability to

inservice teachers. Further, more sophisticated statistical analyses, such as latent cluster analysis, could be employed to further examine groupings of patterns of motivation in individuals.

Nonetheless, the potential of surveys, such as *Why choose teaching*, including the use of the FIT-Choice scale lies in the contribution to the growing body of evidence about teachers' motivations and perceptions. Nationally and internationally, there has been intense policy focus on initial teacher education and recruitment and this is reflected in the application of the FIT-Choice scale with preservice teachers across many contexts. Given growing evidence of the challenges faced in retaining a teaching workforce across many contexts, there is increasing impetus for studying the motivations of inservice teachers.

The benefits of using the FIT-Choice scale with inservice teachers, as demonstrated here, warrants consideration of similar applications in large scale longitudinal investigations in national and intranational contexts. For this to be achieved, further work needs to be done in interrogating influences on teacher motivation across a greater range of individual and contextual factors. This could include further interrogation of the data collected in the current survey to articulate findings in relation to other factors, such as age, cultural background, the selection of teaching as a first or second career, schooling sectors and work experiences in teaching. These studies might profitably use mixed methods strategies with targeted cohorts of teachers and examine how context shapes motivations and perceptions for remaining in the teaching workforce. Within the Queensland context, the potential for developing longitudinal evidence to contribute to policy and practice for recruiting, supporting and retaining teachers would also warrant the repeating of the survey and extending it to consider teacher motivations across a wider range of participants and career stages.

CRedit authorship contribution statement

Colette Alexander: Methodology, Formal analysis, Writing - original draft, Writing - review & editing. **Claire Wyatt-Smith:** Conceptualization, Methodology, Writing - original draft, Writing - review & editing, Supervision, Funding acquisition. **Anna Du Plessis:** Methodology, Formal analysis, Writing - original draft, Writing - review & editing.

Declaration of competing interest

No potential conflict of interest was reported by the authors.

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Appendix A. Participant demographics

Demographic details for the final sample are as follows.
Demographic information of the participants.

Demographic Factor	N	%
<i>Age</i>	195	16.7%
≤29	441	37.9%
30-39	289	24.8%
40-49	189	16.2%
50-59	51	4.4%
60+		
<i>Gender</i>	926	79.5%
Female	237	20.3%
Male	1	0.1%
Other	1	0.1%
Prefer not to answer		
<i>LOTE</i>	1081	92.8%
Yes	84	7.2%
No		
<i>Indigenous</i>	20	1.7%
Yes	1145	98.3%
No		
<i>Employment Sector*</i>	711	68.7%
Government/State	198	19.1%
Independent	161	15.6%
Catholic	32	3.1%
Other		
<i>Educational Sector</i>	371	35.8%
Primary School	369	35.6%
Secondary School	171	16.5%
P-12 School	30	2.9%
Special School	36	3.5%
Early Childhood Setting	59	5.7%
Other		
<i>Highest Qualification</i>	19	1.6%
Doctoral Degree	182	15.6%
Master Degree	291	25.0%
Graduate Diploma	33	2.8%
Graduate Certificate	614	52.7%
Bachelor Degree	26	2.2%
Other		

Note: *This question was only for participants with current employment in a school or early childhood service. The participants may have selected multiple choices for this question resulting in the total percentage being more than 100%.

Data on a range of demographic factors were collected by the survey through sections related to teacher characteristics and employment in teaching. These questions related to age, gender, culture and language, educational sectors and qualifications. The majority of registered teachers in the final sample were female (79.5%), between 30 and 49 years (62.7%), with a Bachelor degree (52.7%). Teachers from diverse cultural backgrounds were in a minority; identifying as from an Indigenous background (1.7%) and regularly speaking another language at home (7.2%). The majority of participants were employed by the government/state sector (68.7%) in primary, secondary or P-12 school contexts (87.9%). The final sample of participants was compared to the target population from the register of teachers in Queensland. The sample was demographically similar to the target population across factors including gender, culture, qualifications and employment sectors. For example, the proportion of the target population who are female (76.8%) and working in the government/state sector (63.3%), was comparable to the final sample. Full demographic analysis is found in the final report (Wyatt-Smith et al., 2017).

The one limitation identified in sampling related to the category of age where teachers under 29 were under-represented in the

sample (16.7%) compared to the target population (35.0%) and those over 50 were over-represented (20.6% compared to 10.6%). An analysis of the target sample identified that this was largely a consequence of random selection. Despite this limitation, the overall demographic distribution of the survey participants was representative of the target population.

Motivation factors	Rank	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
Teaching ability	2	6.0	1.0	–											
Intrinsic career value	1	6.2	1.1	.63	-										
Fallback career	13	1.6	1.1	-.32	-.53	-									
Job security	8	5.2	1.5	.31	.21	-.03	-								
Time for family	10	4.1	1.8	.17	.09	.16	.59	-							
Job transferability	11	3.8	1.6	.23	.08	.19	.62	.56	-						
Shape future of children/adolescents	3	5.9	1.3	.54	.65	-.37	.23	.07	.20	-					
Enhance social equity	9	4.9	1.7	.36	.43	-.15	.14	.02	.23	.70	-				
Make social contribution	4	5.8	1.3	.58	.65	-.35	.30	.14	.27	.81	.68	-			
Work with children	6	5.5	1.5	.46	.66	-.32	.23	.09	.21	.76	.57	.65	-		
Prior teaching and learning experiences	7	5.3	1.6	.33	.36	-.17	.27	.20	.26	.38	.30	.48	.35	-	
Social influences	12	3.3	1.9	.24	.13	.17	.25	.33	.41	.23	.20	.26	.27	.29	-
Subject interest	5	5.8	1.3	.46	.60	-.25	.27	.90	.22	.47	.39	.51	.36	.38	.17

Appendix B. Correlation of motivation factors

Note: Bold figures $p < 0.05$, Bold italic figures, $p < 0.001$.

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