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Effect of medical student preference on rural clinical school experience and rural career intentions

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LW and JMc have direct leadership responsibilities for medical student education programs in Australian rural clinical schools. Their students participate in the FRAME exit survey.

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LW and DD developed the study design and the data collection process, LW drafted the initial version of the manuscript. AS and JMc analysed the data and presented initial results to the group. DP, JMc, RS, AS and LW contributed to data interpretation and critical revision and all authors approved the final version of the paper.

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The effect of medical student preference on rural clinical school experience and rural career intentions.

Abstract

Background:

The key parameter for Rural Clinical Schools (RCSs) is to provide at least 1 year of clinical training in rural areas for 25% of Australian Commonwealth supported medical students with the intent to influence future rural medical workforce outcomes. The objective of this study is to describe the association between a medical student's selection preference and their RCS experience and rural career intent.

Methods:

Medical students completing a RCS placement in 2012 and 2013 were encouraged to complete a survey regarding their experience and future career intent. Data were analysed to compare medical students for whom the RCS was their first choice with students who described the RCS as other than their first preference.

Results:

Students for whom RCS was their first choice (724/1092) were significantly more likely to be female, come from a rural background and be from an undergraduate programme. These students reported more positive experiences of all aspects of the RCS programme (costs, access, support and networks, safety) and were 2.36 times more likely to report intentions to practice in a non-metropolitan area [OR 2.36 (95%CI 1.82-3.06), $p<0.001$]. This was true for students of rural [OR = 3.11 (95% CI 1.93-5.02), $p<0.001$] and metropolitan backgrounds [OR = 2.07 (95% CI 1.48-2.89), $p<0.001$]. More students in the first choice group (68.8%) intended to practice in a regional area (not a capital or major city), significantly higher than the 48.4% of participants in the other preference group [$X^2(1)= 42.79$, $p<0.001$].

Conclusions:

The decision to choose a RCS placement is a marker of rural career intention and a positive rural training experience for students of both rural and metropolitan backgrounds. It may be important to identify other preference students and their specific social support needs to ensure a positive perception of a future rural career.

Introduction

In Australia, Rural Clinical Schools (RCSs) provide at least one year of clinical training in rural areas for 25% of Australian Commonwealth supported medical students. The intent is to strengthen future rural medical workforce. There is considerable evidence in the literature demonstrating the positive impact on rural medical workforce recruitment of meaningful exposure to rural areas during medical school.[1] Some of this literature also suggests that voluntary rural placement positively impacts health professional students' feelings towards rural practice [2-4].

At the time of this study, there are three common selection processes used to allocate medical students to rural clinical schools. Firstly, a number of medical schools have admission options where candidates apply for an RCS-linked medical school position[5]. Secondly, other medical schools invite medical students to apply to the RCS in a competitive process, sometime after they have been accepted into medicine. Finally, many medical schools run an allocation process for RCS and urban clinical placements based on student preference, taking into account special circumstances and placement numbers. These three selection processes can all result in students gaining either their first choice or another preference for clinical training. The objective of this study is to describe the association between a medical student's selection preference and their RCS experience and career intent.

Methods

Since 2007, the Federation of Rural Australian Medical Educators (FRAME) has collected data from medical students who have recently completed a full academic year at a rural clinical school (RCS) in Australia about their experience and future career intent [6]. Note that the Australian Standard Geographical Classification RA2-5 was used as the definition of rural, excluding metropolitan centres. Research Ethics was granted by Flinders University Social and Behavioural Research Ethics Committee (project 4098). Medical students from 19 RCS were invited to complete the questionnaire

during a period from four weeks prior to completion of their RCS placement to 12 weeks after completion of their placement. Individual medical schools nominated whether to invite students by email to participate in an online version of the questionnaire or to have administrative staff at the RCS distribute paper-based questionnaires.

Responses to the 2012 and 2013 versions of the questionnaire (available at http://www.ausframe.org/index.php/2012-06-15-05-28-07/national-rcs-project-secure-data-linkage) have been analysed herein, comparing responses from students whose preference to attend a RCS was their top choice with students for whom it was not their first choice (other preference group). SPSS (Version 22, SPSS Inc., Chicago, USA) was used to calculate descriptive statistics and determine differences between groups. Due to small numbers in some categories of preferred location of future practice, small rural community and remote areas were coded as one cohort.

Missing data were excluded from analysis on a variable by variable basis. Categorical responses were analysed using Pearson's Chi Square test and continuous variables were analysed using Student's T-test with a significant p-value <0.05. Wilcoxon signed ranks tests were used for questions relating to views (ordinal data) prior to and following attendance at a Rural Clinical School. The odds ratio (OR) for future practice in a metropolitan vs non-metropolitan area (RA2-5), as influenced by whether attendance at a RCS was a student's first choice, was determined via binary logistic regression.

Results

There were 440 and 652 responses to the 2012 and 2013 FRAME questionnaires respectively (1092 participants). Survey response rates were 72% of the students invited to participate in 2012 and 88% of this cohort in 2013. Students from Monash University, the University of Wollongong and the University of Melbourne made up 20.9, 12.8 and 10% of responses, respectively. Overall, students

from Victoria and New South Wales contributed almost three quarters of responses (73.4%). The majority of rural clinical schools engaged in the study (Table 1).

Table 1: Response proportions for all Rural Clinical Schools

University Rural Clinical School by State	Number of responses (%) 2012	2013	All	School response rates
AUSTRAIAN CAPITAL TERRITORY				
Australian National University	5 (1.1)	20 (3.1)	25 (2.3)	57%
SOUTH AUSTRALIA				
Flinders University (Flinders University RCS)	27 (6.1)	31 (4.8)	58 (5.3)	*73%
Flinders University (NT Rural Clinical School)	-	5 (0.8)	5 (0.5)	
University of Adelaide	-	35 (5.4)	35 (3.2)	85%
VICTORIA				
Deakin University	-	-	-	-
Monash University (Undergraduate)	54 (12.3)	60 (9.2)	114 (10.4)	*96%
Monash University (Graduate)	63 (14.3)	52 (8.0)	115 (10.5)	
University of Melbourne (Undergraduate)	36 (8.2)	20 (3.1)	56 (5.1)	*94%
University of Melbourne (Graduate)	9 (2.0)	44 (6.7)	53 (4.9)	
NEW SOUTH WALES				
University of Newcastle	32 (7.3)	30 (4.6)	62 (5.7)	88%
University of New England	20 (4.5)	20 (3.1)	40 (3.7)	70%
University of New South Wales	11 (2.5)	63 (9.1)	74 (6.8)	58%
University of Notre Dame (Sydney)	11 (2.5)	23 (3.5)	34 (3.1)	54%
University of Sydney	17 (3.9)	55 (8.4)	72 (6.6)	58%
University of Western Sydney	18 (4.1)	24 (3.7)	42 (3.8)	80%
University of Wollongong	71 (16.1)	69 (10.6)	140 (12.8)	92%
WESTERN AUSTRALIA				
University of Western Australia (Undergraduate)	2 (0.5)	41 (6.3)	43 (3.9)	*47%
University of Western Australia (Graduate)	3 (0.7)	15 (2.3)	18 (1.6)	
University of Notre Dame (Fremantle)	2 (0.5)	23 (3.5)	25 (2.3)	52%
TASMANIA				
University of Tasmania	57 (13.0)	22 (3.4)	79 (7.2)	90%
No affiliation	2 (0.5)	-	2 (0.2)	-
Total	440 (100.0)	652 (100.0)	1092 (100)	

**Response rates are calculated at a university level as the authors did not collect the potential numbers of students in each school subgroup.*

Overall, 724 of 1,092 students across Australia who attended the RCS chose their placement as their first choice, indicating that for 33.7% (n=368) of participants their RCS placement was a preference other than first choice (Table 2).

Table 2: Reported preference to attend a RCS

	Number of participants	%
My last choice	37	3.4
Low on my list	37	3.4
My mid choice	117	10.7
High on my list	177	16.2
My first choice	724	66.3

Overall, 45.4% of participants had attended an Australian secondary/high school outside a capital city or major urban centre. These participants attended an average of 5.1 years (+/- 1.6 SD) of high school outside a capital city or major urban centre, with no significant difference in years of attendance between first choice and other choice groups. . No difference was observed between the first choice and other preference groups in age, bond status, and mean number of years of high school spent outside a capital city (Table 3). Over 60% of RCS first choice participants were female compared to 54% of other preference students [$X^2(1)=4.31$, $p=0.038$]. Almost 56% of participants whose first choice was a RCS were from universities with undergraduate entry into medicine compared with 38% of other preference students [$X^2(1)=29.68$, $p<0.001$]. Rural origin students were more commonly found in the first choice group [45% compared to 37%, $X^2(1)=6.69$, $p=0.010$].

Table 3: Demographic characteristics of participants

Characteristic		RCS first choice (n=724)	RCS other preference (n=368)	All (n=1092)	X^2, *p*-value (T, *p*-value)
Age [Mean (SE)]		25.7 (0.17)	26.2 (0.18)	25.9 (0.13)	1.69, p=0.090
Gender [frequency (%)]*					
	Male	283 (39.4)	167 (46.0)	450 (41.6)	4.31, p=0.038
	Female	435 (60.6)	196 (54.0)	631 (58.4)	
Bond status [frequency (%)] #					
	Bonded	240 (33.3)	109 (29.9)	349 (32.1)	1.30, p=0.254
	un-bonded	481 (66.7)	256 (70.1)	737(67.9)	
Self-identified background [frequency (%)]*					
	Non-rural	393 (55.2)	226 (63.5)	619 (58.0)	6.69, p=0.010
	Rural	319 (44.8)	130 (36.5)	449 (42.0)	
Years of high school outside a capital city [Mean (SE)]					
		2.43 (0.104)	2.41 (0.15)	2.42 (0.09)	-0.138, p=0.890
Entry [frequency (%)]**					
	Undergraduate	404 (55.9)	141 (38.4)	545 (50.0)	29.68, p<0.001
	Graduate	319 (44.1)	226 (61.6)	545 (50.0)	
Participated in longitudinal integrated clerkship [frequency (%)]					
	Yes	361 (50.3)	194 (54.3)	555 (51.7)	1.52, p=0.217
	No	356 (49.7)	163 (45.7)	519 (48.3)	

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

 # Bonded medical students at the time this data was collected had received a place in medical school based on the requirement that they work rurally after graduation for equivalent numbers of years as their medical course

There were significant differences in which geographical area participants intended to practice upon completion of their medical training [$X^2(3)=47.58$, $p<0.001$] (Table 4). Significantly fewer first choice participants intended to practice in a capital or major city [31.2% vs 51.5 %, $X^2(1)=42.79$, $p<0.001$]. More students in the first choice group (24.2%) intend to practice in a smaller town, significantly higher than the 13.5% of participants in the other preference group [$X^2(1)=16.88$, $p<0.001$]. In addition, more first choice participants reported intending to work in a small rural community or remote area (8.7% compared with 4.4%) [$X^2(1)=6.66$, $p=0.010$].

Overall, first choice students were 2.36 times more likely to report intentions to practice in a non-metropolitan area than other preference students [OR 2.36 (95%CI 1.82-3.06), $p<0.001$]. If only students who reported having a metropolitan background are included in the analysis, first choice participants were twice as likely to indicate future rural practice [OR = 2.07 (95% CI 1.48-2.89), $p<0.001$] as students in the other choice group. First choice students with a reported rural background were three times as likely to indicated future rural practice as rural background students in the other preference group [OR = 3.11 (95% CI 1.93-5.02), $p<0.001$].

Students in the first choice group were more likely to agree with the statement (in 2013 survey only) that their RCS medical experience increased their interest in pursuing a career in regional or rural Australia [88.2% vs 75.7%, $X^2(1)=16.94$, $p<0.001$] and remote and very remote Australia [42.6 vs 30.8%, $X^2(1)=8.51$, $p=0.004$]. More first choice RCS students agreed with the statements that they intend to do further medical training (PGY2, PGY3, PGY4 and PGY5) based in a non-metropolitan area (RA2-5) ($t=-5.269$, $p<0.001$).

Table 4: Impact on career intentions

Location	Participants (%)			X^2, *p*-value
	First choice	Other preference	All	
Preferred geographical location for future practice (RCS)				
capital or major city**	222 (31.2)	187 (51.5)	409 (38.0)	42.79, p<0.001
inner regional city (25 000 - 100 000)	256 (36.0)	111 (30.6)	367 (34.1)	3.20, p=0.074
smaller town (10 000 - 24 999)**	172 (24.2)	49 (13.5)	221 (20.6)	16.88, p<0.001
small rural community or remote area*	62 (8.7)	16 (4.4)	78 (7.3)	6.66, p=0.010
My RCS medical experience has increased my interest in pursuing a career in (% agreed) (2013 only):				
General practice	277 (65.6)	137 (62.3)	414 (64.5)	0.72, p=0.397
A medical career in regional or rural Australia**	374 (88.2)	168 (75.7)	542 (83.9)	16.94, p<0.001
A medical career in remote and very remote Australia (RA4-5)**	180 (42.6)	68 (30.8)	248 (38.5)	8.51, p=0.004
I intend to do the following years of training based in a non-metropolitan areas RA 2-5 (% agree) (2013 only)				
Internship	213 (50.4)	79 (35.6)	292 (45.3)	12.82, p<0.001
Accredited PGY2 in specialty of preference	227 (53.7)	93 (42.3)	320 (49.8)	7.51, p=0.006
Accredited PGY3 in specialty of preference	227 (53.9)	88 (40.4)	315 (49.3)	10.55, p=0.001
Accredited PGY4 in specialty of preference	229 (54.1)	85 (38.6)	314 (48.8)	13.92, p<0.001
Accredited PGY5 in specialty of preference	222 (52.6)	85 (38.8)	307 (47.9)	10.99, p=0.001

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

Table 4 indicates that RCS medical experience increased participants' interest in general practice (65% of total cohort). Further exploration of future specialty plans found that overall preference for general practice did not increase when compared to participants reported career preference before commencing RCS. When asked about career preference on entry to a RCS significantly more first choice participants chose general practice or rural medicine as their first preference [30.6 vs 19.8%, $X^2(1)=13.70$, $p<0.001$] and significantly more other preference participants ranked sub-specialist as their first choice [28.9 vs 20.5%, [$X^2(1)=9.20$, $p=0.0002$]. There was no significant change in these preferences for either group when asked about career preference upon exit from their RCS.

More students in the first choice group would recommend the RCS experience to other medical students than did other preference students [96.1% vs 86.7%, $X^2(1)=32.39$, $p<0.001$]. Significantly more students in the first choice group reported that "Overall I felt well supported by my RCS" [87.1% vs 69.9%, $X^2(1)=46.42$, $p<0.001$]. This was true for their experience of financial [66.1% vs

52.1%, $X^2(1)=19.83$, $p<0.001$], and academic [87.3% vs 76.9%, $X^2(1)= 18.85$, $p<0.001$] support, as well as their sense of wellbeing [84.5% vs 66.5%, $X^2(1)=27.78$, $p<0.001$]. Significantly fewer first choice students reported feeling academically isolated [25.3% vs 36.4%, $X^2(1)=14.22$, $p<0.001$]. The greatest difference between the two groups related to whether they felt socially isolated [27.6% vs 48.0%, X2(1) = 26.61, $p<0.001$]

Table 5: Participant agreement with statements about their RCS experience

	Somewhat agree or strongly agree on 5-point Likert scale [frequency (%)]			
	First choice	Other preference	All	X^2, *p*-value
Would recommend the RCS experience to others**	692 (96.1)	314 (86.7)	1006 (93)	32.39, p<0.001
Overall I felt well supported by my RCS**	626 (87.1)	251 (69.9)	877 (81.4)	46.42, p<0.001
I felt well supported financially by my RCS**	475 (66.1)	188 (52.1)	663 (61.4)	19.83, p<0.001
I felt well supported academically by my RCS**	630 (87.3)	277 (76.9)	907 (83.8)	18.85, p<0.001
I felt academically isolated during my rural placement[a]**	183 (25.3)	131 (36.4)	314 (29.0)	14.22,p <0.001
I felt socially isolated during my RCS placement**	118 (27.6)	106 (48.0)	224 (34.6)	26.61, p<0.001
I have a rural based clinician as a mentor[a]*	257 (60.5)	110 (50.5)	367 (57.1)	5.90, p=0.015
I have a metro based clinician as a mentor[a]	76 (18.1)	39 (17.9)	115 (18.0)	0.003, p=0.960
My RCS informed me of health and counselling services that I could access for support if needed*	322 (44.8)	133 (37.1)	455 (42.3)	5.80, p=0.016
Overall, my RCS placement impacted positively on my wellbeing[a]**	360 (84.5)	147 (66.5)	507 (78.4)	27.78, p<0.001

**p<0.05, **p<0.01, [a] 2013 participants only*

Discussion

There were striking differences between the responses of first choice and other preference students on the FRAME survey of student experience and work intention. Students whose first choice was to enter RCS were consistently positive about their RCS experience; more so than their other preference peers. First choice students reported being better supported financially and academically, feeling less isolated during their rural year, and having their wellbeing more positively impacted than other preference students. These findings are particularly significant because a previous study has shown that health professional graduates' workforce outcomes are strongly related to their subjective course-

based experiences [4]. In this respect it may be important to be aware of the experiences of other preference students in the RCS to ensure that negative experiences do not adversely impact on decisions about rural practice.

Indeed the present study data confirms that first choice entrants were more likely than other preference entrants to prefer a rural location for their subsequent practice. This first choice effect was accentuated in their higher preference for small town, remote and very remote work. Previous studies have identified that RCS graduates in general work more remotely [7-8]. Recognising that RCS student interest in non-metropolitan work is reassuringly higher than their city-based peers[9], we propose that first choice students may be responsible for this effect. The rural preference appears robust because first choice, over other preference students, preferred rural locations for prevocational as well as vocational training. Furthermore, these first choice students were more likely to opt for a vocational choice – general practice - which is compatible with their preferred work location. The results presented does not demonstrated that RCSs provide independent impact enough to change the career preference of many students who commenced without interest in rural and remote careers or general practice. However knowing that tertiary hospital experience is de-motivating to students who wish to pursue both both rural and general practice, it is valuable to recognise the impact RCSs have on cementing students' interests in rural and remote practice and in general practice.

The strength of these data lies in the consistent difference between first choice and other preference responses throughout the survey. Although 66% of the sample was first choice, half of the remainder put RCS as "high on the list" yet were consistently more negative about their experience and rural career intentions. This demonstrates that there is something very important about students for whom a RCS is their first choice. The distinction may be partly due to demographic factors, since there were clear differences between the characteristics of first choice and other choice students. RCS students who identified as rural background were more likely to have made the RCS their first choice. This

may be due to rural students' prior commitment to rural practice[9], to their different sense of place[10] and our data on social isolation among non-first-preference students suggest that they may also be in a better position than their urban peers to disengage from their metropolitan based social support networks and re-establish networks in a rural area during the clinical years of their medical course [11]. On the other hand 55% of first choice students were from non-rural backgrounds and further analysis of the data must be done to clarify this issue.

First choice students were also significantly also more likely to be female. The predilection of women for entering RCS has been described previously [12]. FRAME survey data demonstrate that between 2009 and 2014 women consistently made up 58-59% of the cohort [13]. However, this is the first demonstration that the gender difference in interest persists even amongst those who actually enter RCSs, with men entering with lower preferences than women. The reasons for the association between women and RCSs requires further exploration. One possibility is that female students are attracted to the wealth of positive female role models who contribute as clinical academics in Australian RCSs [14]. This finding may also demonstrate that rural practice lacks the rarefied medical hierarchies traditionally found in tertiary hospital specialist training, which can override the capacity for individuals to influence their way of practicing [15].

The principal limitation of this study is the possibility of a systematic bias where students' preferences for RCS have been influenced by reliable reports of poor levels of support provided by specific RCSs. For example, an RCS that provides less support may attract fewer first preference students, and the students attending such a RCS would be less likely to report that they were well supported. As the majority of RCSs are distributed across multiple sites, such a systematic error is unlikely. It is more likely that other preference students require additional or alternate accommodation and social supports and have wisely altered their preferences for clinical training locations accordingly [16].

It is unlikely that academic support would be systematically different between first choice and other preference students, however the level of academic support was experienced differently between first choice and other preference students. Other preference students are by definition not in their preferred placement locations. It is noteworthy that the most marked difference between the first choice and other preference groups is in students' reported levels of social isolation. It is possible that confirmation bias may predetermine the anxiety of other preference students, increase their sense of social isolation and create a subconscious case-building process leading to reporting more negative perceptions of the support they receive from their RCS [17]. Even if the differences in reported academic support were due to subjective differences in perception, we offer the first data to suggest that it is important to identify other preference students and identify their specific social support needs.

Conclusions

This is the first time that the workforce impact of RCS entrance preference has been reported. Preference for RCS is a significant factor in predicting students' reported positive experience during RCS training. The extent to which reported positive experience is related to objective differences in support requirements or confirmational bias is yet to be explored.

The data also indicate that entrance preference could be a significant factor in students' subsequent workforce choices. RCS can cement interest in rural practice in students who did not initially preference rural clinical school attendance. First choice students were significantly more positive than other preference students in expressing a rural career intention. This finding was the case for prevocational as well as vocational training. This highlights the priority to ensure that, as far as possible, first preference students are provided with the opportunity to participate in rural clinical school training. It may also be of value to identify other preference students and their specific social support needs, to proactively facilitate a more positive perception of a future rural career.

References

1. Ranmuthugala G, Humphreys J, Solarsh B, et al. Where is the evidence that rural exposure increases uptake of rural medical practice? . Aust J Rural Health 2007;15:285-8
2. Peach H, Bath N. Comparison of rural and non-rural students undertaking a voluntary rural placement in the early years of a medical course. Medical Education 2000;34:231-3.
3. Denz-Penhey H, Shannon S, Murdoch JC, Newbury J. Do benefits accrue from longer rotations for students in Rural Clinical Schools? Rural and Remote Health 5 (online) 2005;414: Available from http://www.rrh.org.au. (Accessed 25/1/11).
4. Playford D, Larson A, Wheatland B. Going country: rural student placement factors associated with future rural employment in nursing and allied health. Australian Journal of Rural Health 2006;14:14-9.
5. Stagg P, Rosenthal D. Why community members want to participate in the selection of students into medical school. Rural and Remote Health 2012;12:1954 Available at www.rrh.org.au Accessed 15/3/2013.
6. DeWitt D, McLean R, Newbury J, Shannon S, Critchley J. Development of a common national questionnaire to evaluate student perception about the Australian Rural Clinical Schools Program. Rural and Remote Health 2005;5:486 Available from http://rrh.deakin.edu.au Accessed 9/9/2011.
7. Sen Gupta T, Murray, R., Hays, B., & Woolley, T. James Cook University MBBS graduate intentions and intern destinations: a comparative study with other Queensland and Australian medical schools. Rural and Remote Health 2013;13: 2313 (Online)
8. Playford D, Nicholson, A., Riley, G.J., and Puddey, I.B. . Longitudinal Rural Clerkships: increased likelihood of more remote rural medical practice following graduation. . BMC Medical Education 2015:55.
9. Walker J, DeWitt D, Pallant J, Cunningham C. Rural origin plus rural clinical school placement is a significant predictor of medical students' intention to practice rurally: a multi-university study. Rural and Remote Health 12 2012;1908:Available: http://www.rrh.org.au.
10. Cutchin MP. Physician retention in rural communities: the perspective of experiential place integration. Health & Place 1997;3:25-41.
11. Greenhill J, Fielke K, Richards J, Walker L, Walters L. Towards an understanding of medical student resilience in longitudinal integrated clerkships. . BMC Medical Education 2015;[Accepted May 2015].
12. Playford D, Evans, S., Atkinson, D., Auret, K., and Riley, G. Impact of the Rural Clinical School of Western Australia on work location of medical graduates. The Medical journal of Australia 2014;200:104–7.
13. FRAME survey results http://www.ausframe.org/index.php/2012-06-15-05-28-07/national-rcs-project-secure-data-linkage. Fellowship of Rural Australian Medical Educators., 2014. June 2015,
14. Playford DE, Worthington R, Riley G. Women in the rural medical academic workforce. Rural Remote Health 2013;13:2309.
15. Wainer J. Athena's Journey: The Feminine and medicine. PhD thesis, Monash University, Melbourne2005.
16. King K, Purcell R, Quinn S, Schoo A, Walters L. Supports for medical students during rural clinical placements: factors associated with intention to practice in rural locations. Rural and Remote Health Rural and Remote Health 2016;[in press].
17. Nickerson R. Confirmation Bias: A Ubiquitous Phenomenon in Many Guises. Review of General Psychology 1998;2:175-220.