

FAYE BUCKNER

ST05002644

CARDIFF SCHOOL OF SPORT

UNIVERSITY OF WALES INSTITUTE CARDIFF

PARTICIPANT MOTIVATION IN SURFING: EXPLORING PARTICIPANT
MOTIVES, ACHIEVEMENT GOALS AND SELF-DETERMINED
MOTIVATION

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ABSTRACT

The current study aimed to investigate gender difference within participant motives, achievement goal orientations and motivation of male and female surfers. Subjects were males ($n = 44$) and females ($n = 27$) recruited from various surf spots in the UK and Australia. Criterion for participation was that participants had been surfing for over one month and were over 18 years. Participants filled out questionnaires assessing participation motives (Participation Motivation Questionnaire; Gill *et al.*, 1983), achievement goal orientation (Perception of Success Questionnaire; Roberts *et al.*, 1998), social goals (Social Motivation in Sport Scale; Allen, 2003) and motivation (Behavioural Regulation in Sport Questionnaire; Lonsdale *et al.*, in press). Independent samples t-test revealed males were significantly higher in ego orientation, intrinsic motivation to experience stimulation and achievement motives. Moreover, both genders rated highly in task orientation and intrinsic motivation. Results are discussed in accordance with previous research and directions for future research put forward.

CHAPTER I
INTRODUCTION

INTRODUCTION

The benefits of a physically active lifestyle have been well documented over the years, it is widely accepted that ‘physical activity prevents chronic disease, improves health, and is associated with community participation and social health’ (Cameron, Craig, Bull & Bauman, 2007, S162). Health consequences of physical inactivity are estimated to cost the National Health Service (NHS) on average £1 billion each year (BBC news 24, 2007), yet the Participation in Sport in England Survey (Sport England, 2002) revealed only 31% of adults participated in sport on a weekly basis and a mere 15% of adults participated three times a week, indicating that at least 85% of adults in the UK do not reach American College of Sport Medicine (ACSM, 2007) guidelines of moderate exercise for 30 minutes at least five times a week. In addition, nearly twice the number of men were found to participate regularly in sport than women (Sport England, 2002).

These statistics have prompted the government to search for new initiatives and ways of encouraging the population to participate in regular physical activity. Sport England (2005) concluded there was ‘little evidence that solely encouraging traditional forms of sport will lead to a growth in participation rates to meet [Sport England] required targets.’ Therefore, there appears to be a need to investigate new avenues of sporting cultures that are not necessarily traditional. The government is beginning to acknowledge the possible benefits of lifestyle sport.

Lifestyle is understood as a self-interpreted pattern of actions that differentiates one person from another (or allies people through shared practice). Lifestyle sports contribute to this, through interpretations of how people look and behave, what subcultural choices and affiliations they make, what forms of control they take over their lives – for example against formal bureaucracies or sports associations. Lifestyle – and associated sporting forms – are thus associated with wider patterns of consumption, taste and identity.

(Tomlinson, Ravenscroft, Wheaton & Gilchrist, 2005,
pg. 2)

Wheaton (2004) suggested board sports like skating, surfing, snowboarding and windsurfing particularly encompassed the definition of lifestyle sports. Surfing could be described as a holistic approach to physical activity, which encompasses ‘mind and body, thought and emotion, image and experience’ (Ford & Brown, 2006, pg. 7), which is why board sports may be perceived to promote more health benefits than traditional sports for people of all ages. Evidence of this appeal comes from the fact that in the twenty-first century surfing in the UK has become one of the fastest growing sports for both women and men in their thirties and forties (Wheaton, 2004). Previously the board sports industry had particularly targeted teenage boys and more recently teenage girls have been targeted through brands such as Rip Curl, Roxy and Quiksilver and media coverage of women’s surfing competitions.

Promoting surfing to adults would be a new approach to getting the population physically active, and as Wheaton (2004) has shown, it is not just a younger population that is interested in taking up the activity. The Participation in Sport in England Survey (Sport England, 2002) showed much less women participate in regular physical activity than men, although there is little research how many people participate in lifestyle sports (Sport England, 2005), it seems logical to assume that surfing follows the same trend as other traditional sports, with many more male than female participants. It would be beneficial to investigate why fewer women participate and how more women could be encouraged to surf. Asthana (2003) established that whilst some girls are breaking the boundaries within lifestyle sport. The next task for the [lifestyle sport] industry is to encourage more women to take part. However, in order to promote surfing one must first understand why surfers participate and what keeps surfers involved so promotion strategies can be tailored to increase their effectiveness.

The current study aimed to investigate gender difference within participant motivation and achievement goal orientations of male and female surfers. While it is beyond the scope of the current study once motives for surfing are established the information collected could be utilised to inform interventions aimed at promoting surfing in order to increase the amount of regularly physically active people in the UK. Long-term, the increase in regular activity levels may reduce the burden of

inactive-related illness and disease on the NHS. Not only could the data from this study be used to encourage people to begin surfing but also to maintain their interest in surfing by enhancing the learning environment in surfing lessons so attrition is minimal.

CHAPTER III
METHOD

METHOD

Participants

Participants consisted of 44 male and 27 female surfers from the UK and Australia over the age of 18 years old.

Instrumentation

Goal Orientations

The POSQ (Roberts *et al.*, 1998) was used to assess the goal orientation of subjects within a surfing context. It consisted of 12 items incorporating six ego related items and six task related items. In the original questionnaire by Roberts *et al.* (1998) participants were required to respond to the question 'When playing sport, I feel most successful when:'. In order to make the questionnaire more specific to surfing the leading question was changed to: 'When surfing I feel most successful when:'. Subjects rated answers on a scale of 1-5 (1 = strongly disagree, 5 = strongly agree).

Research into the POSQ has thus far confirmed it is a 'valid and reliable instrument to measure task and ego motivational orientations in sport' (Roberts *et al.*, 1998, pg. 344) with test-retest reliability for task orientation $\alpha = .80$ and ego orientation $\alpha = .78$ for ego orientation and concurrent validity displaying correlations of .08 for task and .71 for ego orientation (Roberts *et al.*, 1998). A further advantage was that POSQ was developed specifically for sport, thus it was thought to be more applicable to this study than other goal orientation measures such as TEOSQ (Duda, 1989), which were derived from the education domain.

Social Goal Orientations

SMOSS (Allen, 2003), was used to measure social goal orientations within sport. The stem was slightly adapted from the original, 'I feel things have gone well in my sport, when...' to 'I feel things have gone well with my surfing, when...'. Participants were asked to respond to 15 items assessing three aspects of social motivation (social affiliation, social status and social recognition of ability), using a 5-point likert-scale with options ranging for 1= strongly disagree to 5= strongly agree.

SMOSS has demonstrated validity and internal reliability in accordance to Cronbach's alpha where .70 is acceptable (affiliation $\alpha = .84$, social status $\alpha = .78$, and social recognition, $\alpha = .80$; Allen, 2005).

Participant Motivation

PMQ (Gill *et al.*, 1983) was used to measure participation motives. Participants were asked to respond to the statement, 'think about the reasons you have participated in surfing in the last three months. Indicate how true each of the following statements are to you.' Answers were scored on a 5 point likert-scale how important each item was to them with regards to surfing (1 = not at all to 5 = very important).

Gould *et al.* (1985) pilot tested PMQ and found test-retest reliability of $\alpha = 0.68$.

Behavioural Regulation in Sport Questionnaire

In order to measure motivation in surfers the BRSQ (Lonsdale *et al.*, in press) was included in the questionnaire booklet. The BRSQ contained all subcomponents of intrinsic motivation (IM; IM to know, IM towards accomplishment, and IM to experience stimulation), extrinsic motivation (integrated regulation, identified regulation, introjected regulation, and external regulation) and amotivation.

Subjects were requested to read each of the 36 items and consider the reasons they had for participating in surfing, they indicated the relevance of each statement on a 5 point likert-scale ranging from 1= not true at all to 5= very true.

BRSQ was shown to demonstrate strong scores for factorial validity and internal consistency (α ranged from .77-.91) as well as acceptable test-retest reliability (amotivation $\alpha = .83$, external regulation $\alpha = .79$, introjected regulation $\alpha = .87$, identified regulation $\alpha = .88$, integrated regulation, $\alpha = .90$, IM-accomplishment $\alpha = .86$, IM-knowledge $\alpha = .80$, IM-stimulation $\alpha = .90$) and possess stronger psychometric properties than SMS (Lonsdale *et al.*, in press).

Procedure

Various surf spots were targeted, such as on the beach, in surf shops, or hostels, alternatively some participants were contacted via email. Data was collected between December 2007 – April 2008 from both the United Kingdom and Australia. The only criterion for subjects' participation was that they had been surfing for over one month and were over 18 years of age.

Subjects were approached randomly by the researcher and asked to participate in the study once eligibility to participate had been established. An informed consent section was included at the start of the questionnaire, which detailed the aim of the study, approximate time the questionnaire would take to complete, right to withdraw and confidentiality issues. Participants indicated their understanding and agreement by signing the form prior to completing the questionnaire which took 15-25mins to complete.

Data Analysis

All subscales were examined for reliability using Cronbach's alphas. Pearson's correlations were used to examine relationships between all independent and dependent variables. As surfers from both Australia and UK were sampled, independent samples t-test was employed to ensure there were no cultural differences prior to the main analysis. An independent samples t-test was used to examine gender differences (independent variable) on the twenty-two dependent variables (five goal orientation variables; eight motivation variables; eight participation motivation variables). Data analysed on SPSS 12.0.

CHAPTER IV
RESULTS

RESULTS

As can be seen in table one there were many significant correlations between the different subscales in the four questionnaires given to participants.

Table 1. Descriptive statistics for participation motives, goal orientation and motivation subscales

	N	M	SD	α	1	2	3	4	5	6	7	8	9	10	11
1	71	2.04	.84	.89	...										
2	70	3.73	.78	.83	-.004	...									
3	71	3.25	.72	.62	.418**	.212	...								
4	71	4.00	.71	.83	-.178	.334**	.155	...							
5	71	2.02	.80	.75	.542**	-.338**	.105	-.199	...						
6	71	3.71	.83	.60	.400**	.205	.475**	.016	.011	...					
7	71	4.03	.76	.60	-.123	.067	-.050	.482**	.061	.070	...				
8	70	2.72	.61	.70	.555*	-.175	.181	.007	.597**	.249*	.11	...			
9	71	3.74	.52	.47	.051	.326**	.143	.188	-.254	.159	.121	.138	...		
10	71	4.20	.70	.81	-.082	.031	-.031	.122	-.208	.111	.142	-.007	.455**	...	
11	71	4.44	.52	.61	.087	.566**	.227	.157	-.374**	.162	.059	-.111	.443**	.236*	...
12	71	2.67	.97	.70	.188	.040	-.029	.012	.349**	.197	.211	.268*	.095	.191	.000
13	71	2.56	.76	.41	.265*	.087	.261*	.250*	.175	.311**	.209	.399**	.206	.275*	.082
14	71	4.61	.46	.65	.062	.074	.327**	.190	-.223	.133	.052	-.123	.422**	.140	.378*
15	70	4.20	.67	.61	.090	.180	.286*	.272*	-.223	.324**	.025	.065	.324**	-.075	.251*
16	70	3.60	.87	.81	-.047	.076	.095	.186	-.088	-.067	.077	.000	.197	.170	.107
17	71	1.78	.83	.79	.360**	-.07	.046	-.210	.511**	-.084	.398**	-.197	-.076	-.276*	.209
18	69	1.61	.86	.88	.211	-.201	-.326**	-.263*	.409**	-.145	-.930	.326**	-.350**	-.263*	-.306*
19	71	3.26	.68	.54	-.038	.130	.061	.182	-.172	.213	.031	.133	.533**	.234*	.186
20	69	3.75	.73	.67	.069	.175	.248*	.050	-.257*	.503**	.139	.407**	.315**	.416**	.096
21	70	3.91	.79	.84	.157	.076	.345**	.109	-.058	.663**	.228	.145	.182	.190	.188
22	71	1.55	.76	.79	.262*	-.053	-.077	-.290*	.420**	.032	-.127	.344**	-.220	-.068	-.242*

** Correlation significant at the 0.01 level (2-tailed).

* Correlation significant at the 0.05 level (2-tailed).

1 Ego	7 Friends	13 Other	19 Identified
2 Task	8 Achievement	14 Intrinsic motivation	20 IM Accomplishment
3 Social recognition	9 Energy	15 IM stimulation	21 IM to know
4 Social affiliation	10 Fitness	16 Integrated	22 External regulation
5 Social status	11 Fun	17 Introjected	
6 Skill	12 Team	18 Amotivation	

Table one also lists the Cronbach's alpha for each subscale, which indicates the reliability. It was found that ten of the twenty-two subscales fell below the

recommended $\alpha > 0.70$ but two in particular were very low energy ($\alpha = .47$) and other ($\alpha = .41$), therefore it was decided not to include these subscales in the rest of the investigation. The other subscales below but close to the recommended $\alpha > .70$ have been incorporated in the study however results should be interpreted with caution.

Many significant correlations between subscales emerged, specifically in accordance with previous research ego and social status, ego and introjected regulation, task and social affiliation, and similarly task and friends, a negative relationship between task and social status was found as well as a positive correlation between achievement and IM accomplishment and amotivation and social status.

A correlation between ego and skill was found and also introjected regulation and friends demonstrated a strong positive correlation.

An independent samples t-test revealed the only subscale to differ between Australian and UK participants was fitness (.026, $p < .05$, two-tailed)

Table 2. Participant Motives Gender Analysis

Variable	Gender	N	M	SD	t	df	sig.
Skill	male	44	3.78	.94	0.92	69	.360
	female	27	3.59	.62			
Friends	male	44	4.03	.82	0.84	69	.934
	female	27	4.02	.66			
Achievement	male	44	2.84	.66	2.183	68	.032
	female	26	2.52	.46			
Fitness	male	44	4.07	.79	-2.024	69	.047
	female	27	4.41	.47			
Fun	male	44	4.07	.79	-0.597	69	.552
	female	27	4.41	.47			
Team	male	44	2.59	.91	-0.837	69	.405
	female	27	2.79	1.07			

Table two shows results from the PMQ it is evident that correlations for achievement and fitness display a significant gender difference ($p = .05$). Males appeared to surf for achievement reasons ($M = 2.84$) more than females ($M = 2.52$), whereas females ($M = 4.41$) rated fitness significantly higher than males ($M = 4.07$).

Table 3. Achievement Goal Gender Analysis

Variable	Gender	N	M	SD	t	df	sig.
Ego	male	44	2.20	.87	2.073	69	.042
	female	27	1.78	.72			
Task	male	43	3.76	.87	.437	68	.664
	female	27	3.68	.75			
Social Recognition	male	44	3.22	.79	-.562	69	.576
	female	27	3.31	.59			
Social Affiliation	male	44	4.10	.65	1.57	69	.122
	female	27	3.83	.79			
Social Support	male	44	2.13	.81	1.40	69	.166
	female	27	1.85	.78			

Differences in achievement goal orientation are evident in table three. At a level of significance of 0.05 males ($M = 2.20$) exhibited more ego orientation than females ($M = 1.78$). Interestingly there was no significant gender difference in social goals, both males and females were high in social affiliation and low in social recognition and especially social support.

Table 4. Motivation Gender Analysis

Variable	Gender	N	M	SD	t	df	sig.
IM	male	44	4.61	.49	.022	69	.982
	female	27	4.61	.43			
IM stimulation	male	43	4.38	.59	3.068	68	.003
	female	27	3.90	.71			
Integrated	male	44	3.54	.93	-.800	68	.429
	female	26	3.71	.77			
Introjected	male	44	1.91	.89	1.670	69	.100
	female	27	1.57	.70			
Amotivation	male	44	1.73	.99	1.560	67	.124
	female	25	1.40	.54			
Identified	male	44	3.36	.67	1.570	69	.122
	female	27	3.10	.67			
IM Accomplishment	male	43	3.69	.82	-.792	67	.431
	female	26	3.84	.57			
IM to know	male	43	3.90	.91	-.157	68	.876
	female	27	3.93	.55			
External regulation	male	44	1.54	.78	-.134	69	.894
	female	27	1.56	.74			

Table four shows results from the BRSQ. At a level of significance of 0.05 it was evident that males ($M = 4.38$) showed more intrinsic motivation to experience stimulation than females ($M = 3.90$). There was no other significant gender difference, however both male and female surfers showed very high levels of intrinsic motivation and low levels of introjected and external regulation and amotivation, showing that on the whole the current sample were high in self-determined motivation.

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APPENDICIES

APPENDIX A.

Participant motivation for surfing

Information/Informed consent

The research aims to explore motivation of surfers.

As a participant you will be asked to complete four questionnaires, taking a total of about 10 minutes. There are no risks involved in participation.

Participation is completely voluntary and you are free to withdraw from the research at any time.

Your information will be kept private and confidential and your name will not appear at any stage of the research process. Access to data will be restricted to the researcher only.

I have read and understood the information given above requesting for my participation in the proposed research. I understand that participation is voluntary and that withdrawal is possible at any time. I understand the measures that will be taken to uphold confidentiality. I agree to participate

Signature:

Date:

Section 1 (Please tick appropriate box)

1. Age

- 18-24
- 25-29
- 30-35
- 35+

2. Gender

- Male
- Female

**3. Approximately how many months/years have you been surfing for?
(Please specify)**

.....

4. Place of participation in this questionnaire

- United Kingdom
- Australia

Section 2

What does being successful at surfing mean to you? There is no right or wrong answers. Please circle the number that best indicates how you feel.

	Strongly disagree		Neutral		Strongly agree
1. I beat other people	1	2	3	4	5
2. I am clearly superior	1	2	3	4	5
3. I am the best	1	2	3	4	5
4. I work hard	1	2	3	4	5
5. I show clear personal improvement	1	2	3	4	5
6. I out perform other surfers	1	2	3	4	5
7. I reach a goal	1	2	3	4	5
8. I overcome personal difficulties	1	2	3	4	5
9. I reach personal goals	1	2	3	4	5
10. I win	1	2	3	4	5
11. I show other people I am the best	1	2	3	4	5
12. I perform to the best of my ability	1	2	3	4	5

Section 3

Circle the number corresponding to how strongly you agree or disagree to the following statement

I feel things have gone well with my surfing, when....

	Strongly disagree		Neutral		Strongly agree
1. Others tell me I have performed well	1	2	3	4	5
2. I make some good friends	1	2	3	4	5
3. I belong to the popular group	1	2	3	4	5
4. Other surfers and I have a laugh together	1	2	3	4	5
5. I am the centre of attention	1	2	3	4	5
6. I make new friends who I socialize with outside of surfing	1	2	3	4	5
7. I have fun with other surfers	1	2	3	4	5
8. I am part of the 'in' crowd	1	2	3	4	5
9. Others think I'm really good at surfing	1	2	3	4	5
10. I receive recognition from others for my accomplishments	1	2	3	4	5
11. Spending time with other surfers is enjoyable	1	2	3	4	5
12. I become friends with some of the other surfers	1	2	3	4	5
13. Others are impressed by my sporting ability	1	2	3	4	5
14. I am one of the more popular surfers	1	2	3	4	5
15. Just hanging out with the others is fun	1	2	3	4	5

Section 4

For each question please circle how important each statement is to you with regards to surfing.

1= not at all important, 3=somewhat important, 5=very important.

	Not at all important	2	Some what important	4	Very Important
1. I want to improve my skills	1	2	3	4	5
2. I want to be with my friends	1	2	3	4	5
3. I like to win	1	2	3	4	5
4. I want to get rid of energy	1	2	3	4	5
5. I like to travel	1	2	3	4	5
6. I want to stay in shape	1	2	3	4	5
7. I like the excitement	1	2	3	4	5
8. I like the teamwork	1	2	3	4	5
9. My parents or close friends want me to participate	1	2	3	4	5
10. I want to learn new skills	1	2	3	4	5
11. I like to meet new friends	1	2	3	4	5
12. I like to do something I'm good at	1	2	3	4	5
13. I want to release tension	1	2	3	4	5
14. I like the rewards	1	2	3	4	5
15. I like to get exercise	1	2	3	4	5
16. I like to have something to do	1	2	3	4	5
17. I like the action	1	2	3	4	5
18. I like the team spirit	1	2	3	4	5
19. I like to get out of the house	1	2	3	4	5
20. I like to compete	1	2	3	4	5
21. I like to feel important	1	2	3	4	5
22. I like being on a team	1	2	3	4	5
23. I want to go on to a higher level	1	2	3	4	5
24. I want to be physically fit	1	2	3	4	5
25. I want to be popular	1	2	3	4	5
26. I like the challenge	1	2	3	4	5
27. I like the coaches or instructors	1	2	3	4	5
28. I want to gain status or recognition	1	2	3	4	5
29. I like to have fun	1	2	3	4	5
30. I like to use the equipment	1	2	3	4	5

Section 5

Please think about the reasons you have for participating in surfing in the last 3 months

Indicate how true each of the following statements are to you.

1=not true at all, 3= somewhat true, 5= very true.

I surf

	Not true at all	Somewhat true	Very t	Very t	Very t
1. Because I enjoy it	1	2	3	4	5
2. Because of the pleasure I experience when I feel completely absorbed in my sport	1	2	3	4	5
3. Because it's part of who I am	1	2	3	4	5
4. Because it's an opportunity to just be who I am	1	2	3	4	5
5. Because I would feel ashamed if I quit	1	2	3	4	5
6. But the reasons why are not clear to me anymore	1	2	3	4	5
7. Because I would feel like a failure if I quit	1	2	3	4	5
8. But I wonder what's the point	1	2	3	4	5
9. Because what I do when I surf is an expression of who I am	1	2	3	4	5
10. Because the benefits of surfing are important to me	1	2	3	4	5
11. Because I enjoy the feeling of achievement when trying to reach long-term goals	1	2	3	4	5
12. Because I enjoy the feeling of success when I achieve something important	1	2	3	4	5
13. Because if I don't other people will not be pleased with me	1	2	3	4	5
14. Because I like it	1	2	3	4	5
15. I enjoy learning new things about surfing	1	2	3	4	5
16. Because I feel obligated to continue	1	2	3	4	5
17. But I question why I continue	1	2	3	4	5
18. Because I feel pressure from other people to surf	1	2	3	4	5
19. Because of the excitement I feel when I am really involved in surfing	1	2	3	4	5
20. Because people push me to surf	1	2	3	4	5
21. Because it's fun	1	2	3	4	5
22. Because it teaches me self-discipline	1	2	3	4	5
23. Because I enjoy doing something to the best of my ability	1	2	3	4	5
24. Because I would feel guilty if I quit	1	2	3	4	5
25. Because I find it pleasurable	1	2	3	4	5
26. Because I like learning how to apply new techniques	1	2	3	4	5
27. Because I value the benefits of surfing	1	2	3	4	5
28. Because I enjoy learning new techniques	1	2	3	4	5
29. Because I love the extreme highs that I feel whilst surfing	1	2	3	4	5
30. But I question why I am putting myself through this	1	2	3	4	5
31. because it is a good way to learn things which could be useful in my life	1	2	3	4	5
32. Because of the positive feelings I experience whilst surfing	1	2	3	4	5
33. In order to satisfy people who want me to participate	1	2	3	4	5
34. Because I get a set of accomplishment when I strive to achieve my goals	1	2	3	4	5
35. Because it allows me to live in a way that is true to my values	1	2	3	4	5
36. For the pleasure it gives me to know more about surfing	1	2	3	4	5

Thank you for taking the time to participate in this research, your help is much appreciated.

APPENDIX B.

Descriptives

	N	Minimum	Maximum	Mean	Std. Deviation
age	71	1	4	1.70	.947
ego	71	1.00	4.67	2.0399	.83403
task	70	1.00	4.83	3.7310	.78343
socialrecognition	71	1.25	5.00	3.2535	.71651
socialaffiliation	71	1.14	5.00	3.9980	.71244
socialstatus	71	1.00	3.75	2.0211	.80373
skill	71	1.33	5.00	3.7089	.83177
friends	71	1.00	5.00	4.0282	.75540
achievement	70	1.50	4.33	2.7214	.61170
energy	71	2.60	5.00	3.7437	.51623
fitness	71	2.00	5.00	4.1972	.70052
fun	71	2.25	5.00	4.3592	.53072
team	71	1.00	5.00	2.6667	.97101
other	71	1.00	4.33	2.5634	.75926
IM	71	3.00	5.00	4.6127	.46250
IMstimulation	70	2.50	5.00	4.1929	.67455
integrated	70	1.25	5.00	3.6036	.87071
introjected	71	1.00	4.50	1.7817	.83338
amotivation	69	1.00	4.75	1.6123	.86234
identified	71	1.50	5.00	3.2606	.67670
IMaccomplishment	69	2.00	5.00	3.7464	.73326
IMtoknow	70	1.00	5.00	3.9071	.78732
extrinsic	71	1.00	4.50	1.5493	.76137
Valid N (listwise)	63				

APPENDIX C.

	country	N	Mean	Std. Deviation	Std. Error Mean
ego	UK	33	2.0960	.83128	.14471
	Australia	37	2.0180	.83959	.13803
task	UK	32	3.7917	.82305	.14550
	Australia	37	3.6667	.76174	.12523
socialrecognition	UK	33	3.3030	.78749	.13709
	Australia	37	3.2297	.65452	.10760
socialaffiliation	UK	33	4.0476	.62338	.10852
	Australia	37	3.9421	.79430	.13058
socialstatus	UK	33	2.0985	.80511	.14015
	Australia	37	1.9662	.81471	.13394
skill	UK	33	3.6768	.77944	.13568
	Australia	37	3.7568	.88767	.14593
friends	UK	33	4.0000	.69597	.12115
	Australia	37	4.0541	.82314	.13532
achievement	UK	33	2.7020	.71170	.12389
	Australia	36	2.7454	.52173	.08695
fitness	UK	33	3.9899	.80141	.13951
	Australia	37	4.3604	.54647	.08984
fun	UK	33	4.3485	.47574	.08282
	Australia	37	4.3649	.58806	.09668
team	UK	33	2.6263	1.03333	.17988
	Australia	37	2.7207	.93133	.15311
IM	UK	33	4.6364	.50035	.08710
	Australia	37	4.5811	.43323	.07122
IMstimulation	UK	33	4.3182	.65632	.11425
	Australia	36	4.0764	.68873	.11479
integrated	UK	32	3.5313	.91526	.16180
	Australia	37	3.6486	.84463	.13886
introjected	UK	33	1.7500	.91643	.15953
	Australia	37	1.8176	.77426	.12729
amotivation	UK	32	1.7244	1.04745	.18511
	Australia	37	1.7244	1.04745	.18511

APPENDIX D.

T-test- Gender Difference

	gender	N	Mean	Std. Deviation	Std. Error Mean
ego	male	44	2.1970	.86809	.13087
	female	27	1.7840	.71882	.13834
task	male	43	3.7636	.81181	.12380
	female	27	3.6790	.74811	.14397
socialrecognition	male	44	3.2159	.78797	.11879
	female	27	3.3148	.59076	.11369
socialaffiliation	male	44	4.1006	.64522	.09727
	female	27	3.8307	.79444	.15289
socialstatus	male	44	2.1250	.80964	.12206
	female	27	1.8519	.77911	.14994
skill	male	44	3.7803	.93991	.14170
	female	27	3.5926	.61556	.11847
friends	male	44	4.0341	.81695	.12316
	female	27	4.0185	.65752	.12654
achievement	male	44	2.8409	.66371	.10006
	female	26	2.5192	.45540	.08931
fitness	male	44	4.0682	.78612	.11851
	female	27	4.4074	.47442	.09130
fun	male	44	4.3295	.51651	.07787
	female	27	4.4074	.55965	.10771
team	male	44	2.5909	.90609	.13660
	female	27	2.7901	1.07476	.20684
IM	male	44	4.6136	.48661	.07336
	female	27	4.6111	.42930	.08262
IMstimulation	male	43	4.3779	.58598	.08936
	female	27	3.8981	.71137	.13690
integrated	male	44	3.5398	.92909	.14007
	female	26	3.7115	.76711	.15044
introjected	male	44	1.9091	.88936	.13408
	female	27	1.5741	.69964	.13465
amotivation	male	44	1.7330	.98742	.14886
	female	25	1.4000	.53522	.10704