

An Investigation into the causes of Student Drop Out Behaviour

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Patrick Lockhart

Abstract

This study investigates the phenomenon of student drop out from higher education, a problem that has increased within the UK over recent years. This analysis is the first of its kind as up to this point no literature on the topic has used a sample of student drop outs to examine causes of their withdrawal decisions, due to the plethora of problems that exist in contacting and obtaining a sample from the population of student drop outs. The study used a matched pairs design consisting of 15 students who persisted in studying their course and 15 students who decided to leave their courses before they were completed.

The participants completed a battery of questionnaires that were designed to test a variety of hypotheses, in an attempt to objectively discern different factors that may contribute to student drop out decisions. A semi-structured interview was also conducted with each participant to gather qualitative data concerning the drop out decision, in an attempt to uncover subjective attributions for drop out behaviour, and to detect other possible factors that may play a role in student attrition that had not previously been considered.

Results found that the extent to which an individual is socially and academically integrated into the university plays an important role in drop out decisions; as does the academic confidence that the individual harbours. No definite conclusions can be made concerning the role of personality within drop out from the data collected, or indeed whether homesickness accounts for a significant proportion of drop out decisions.

Further research must be conducted into the area incorporating much larger samples, and in the future the role of health problems within drop out decisions should also be considered.

A study into the Behaviour of Student Drop Out evaluating the Tinto Model

Introduction

The United Kingdom has long prided itself on the relatively higher proportions of students who, having obtained a place in university or college, complete their courses and achieve the standard necessary to obtain the qualification for which they have been studying. For a long time failure to complete or to qualify was referred to as 'dropout' and 'wastage'. The attitude that 'a year in college' was useful in itself, common in other countries, was not common here. In 1982, 13% of students did not complete their courses, but as education has expanded over the last twenty years, so too has the drop out rate, which by 1998 had risen to 18% of students. Within Glasgow University, figures indicate that in 2000, just under 12% of the first-year cohort did not proceed to second year. Only recently have the terms 'retention' and 'attrition' come into general use to indicate what proportions of students do or do not transfer successfully from one stage of a course to the next. High retention and low non-completion owe much to careful and appropriate initial selection, adequate and readily available means of student support and close individual attention from staff. The expansion of higher education during the 1990s made all these more difficult. Expansion significantly reduced the 'wastage' that is due to only a small proportion of the population being able to access higher education. But it also meant a broader

spread of entry qualifications and standards amongst those admitted, and thus less certainty of their success. This increase in non-completion rates could undermine success in opening higher education to a broader spectrum of the population, put off potential students, and cause institutional instability. The issue of student drop out is therefore a particularly important social issue – in the USA American academics are also quick to suggest that society would be better off if student attrition could be lowered (e.g. Fisher, 1987; James, 1996). It has therefore become increasingly important to evaluate and interpret drop out behaviour in order to allow development and implementation of policies to reduce student attrition.

Whilst there are statistics indicating the rates of voluntary student withdrawal, there are still no firm theoretical perspectives that adequately account for the behaviour of drop out from higher education. Tinto's (1975) interactional theory of student departure is the paradigm theory within this field: an explanatory, predictive model of the drop out process, which contains core concepts of academic and social integration into the institution. The model is longitudinal and considers drop out behaviour as a function of the quality of a student's interactions with the academic and social systems of the college. The individual characteristics of a student play a role in the departure process, such as their individual attributes (ability, race, gender), family background characteristics (parental education level), pre-university schooling experiences and academic background (e.g. grades achieved). When these factors are taken into account, they are said to determine the level of initial commitment that an individual has to an institution, and to their goal of graduation. This in turn affects the degree to which the student integrates into the academic and social systems in the place of higher education: the crux of the theory is that the greater the level of integration, the greater the likelihood the individual will persist in college.

Primarily the student's academic performance and his or her level of intellectual development determine extent of academic integration. Social integration is primarily a quality of peer-group interactions and the quality of student interactions with faculty. Tinto's model of integration places interactions with faculty in the domain of social integration, but clearly suggests that these interactions may also enhance academic integration. Levels of academic and social integration lead to an additional component termed 'commitments.' This consists of commitments to the institution and to goals associated with graduation and career. As level of institutional and goal commitment increases there is a corresponding likelihood of persisting at the institution.

A number of studies have sought to validate empirically the global features of the Tinto model (e.g. Nora, Attinasi, & Matonak, 1990; Nora & Rendon, 1990; Pascarella, Duby, & Iverson, 1983; Pascarella & Terenzini, 1980, 1983). Perhaps the most noteworthy line of empirical research examining the role of integration in student attrition is that begun by Pascarella & Terenzini (1980). Using a series of Likert scaled items Pascarella & Terenzini devised five factor-analytic scales operationalising Tinto's integration and commitment constructs, in an attempt to validate their predictive ability. Montmarquette (2000) has more recently completed a study examining determinants of university drop out using longitudinal data on student enrolments at the university of Montreal.

To date, however, none of the traditional research in this area has attempted to assess or capture qualitative or quantitative data from the actual population of people who have dropped out of higher education. The trend in this area has been to employ a longitudinal design that captures data from a large sample of students, typically in their first year of higher education, at a series of points of time, and then to address

this obtained sample at the beginning of their second year. The data obtained from those who are no longer on their courses (i.e. have dropped out) by this point in time is then analysed and subjectively interpreted, with the experimenter particularly looking to find differences between those who persist in higher education and those who drop out. However, the problem with this line of experimental design is that the population that the experimenter is studying is never actually directly studied. The data obtained from the sample is from a point in time in which those who later dropped out are actually still students. Essentially therefore, inferences can only be made as to why any individual may choose to withdraw from higher education and this situation is obviously unsatisfactory. Furthermore, despite the volume of quantitative data on reasons for student departure, it is still unclear how students perceive their own departure at varying points of their college careers. Therefore, this investigation used semi-structured interviews to investigate the students' perceptions of processes leading to persistence decisions and personal growth in university as proposed by Tinto, but the interviews were also aimed to uncover variables and processes not explicitly addressed by Tinto's model. Up to present there has been no experimental research that has investigated the behaviour of student drop out using a sample of students that have actually dropped out.

This study is designed in an attempt to address these issues.

Method

Design and sample

The experiment used a matched-pairs design, creating two experimental groups. The experimental hypothesis is that students who voluntarily withdrew from their course will feel less integrated into the university both socially and academically than

those students who chose to persist in their studies. The null hypothesis is that students who withdrew will score the same on the questionnaire as students who persisted.

The experiment integrated a number of controls:

1. Using standardised instructions for both groups.
2. Using identical apparatus for each participant (note however, that wording of the questionnaire was tailored to be relevant to each experimental group).
3. Participants were all tested in a similar environment.

Thirty participants were used. Fifteen were students, and fifteen were participants who had chosen to withdraw from higher education. The present study matched pairs with regard to the following characteristics:

- Gender
- Type of accommodation
- Course undertaken
- Number of Highers or A-levels completed at A to C level

It was deemed important to match participants particularly for these characteristics, as there may well be gender differences in drop out behaviour¹ or attitudes towards drop out behaviour. Type of accommodation needs to be taken into account, as there is a significant amount of literature to suggest staying in university owned accommodation on campus or with other students on or near campus rather than living at home or a removed distance from the campus greatly aids integration to university life socially and academically (Christie & Dinham, 1991; Torres & Solberg, 2001). Interviews revealed that living on campus enhanced the students' opportunities for integration into the college systems through meeting other students,

¹ Glasgow University's overall attrition rate last session was slightly higher for males than for females - 13.5% and 10.8%, respectively (Patrick, 2001).

developing student friendships, gaining information about social opportunities on campus and helping shift away from high school friendships. Furthermore, previous research has revealed that throughout various courses, the pattern of student drop out differs. It is therefore important to ensure that the matched pairs attended the same course in an attempt to ensure the participants experienced similar university conditions. Number of Highers or A levels was seen as a useful measure as it infers that the participants selected have similar levels of ability, and so the drop out decision has not been taken due to a lack of necessary ability to complete the course. Matching was used, as it controlled for these variables, so that any differences found between the experimental groups would not be as a result of these factors.

Furthermore, background variables were also included in the study, such as the participants' mother & father's academic background (up to what level they studied); the rank of the university they went to as college choice (1st to 6th, or through clearing); their pre-enrolment confidence that choosing to attend university was the right choice; the number of extracurricular activities they participated in with people from university; the degree to which they still associated with friends from school; whether they had a job and if so, how much time they spent working; and whether they were in a significant amount of debt, and if that worried them. Participant responses to these questions were typically similar within the matched pairs design and so these variables were also taken into account as part of the matching process.

Instruments used

Participants completed a questionnaire using a pen. The questionnaire consisted of a series of questions answered on a five-item Likert scale, which were based on the Tinto model. Fifty-four items were included. Specifically, the questions related to

academic integration, social integration within the university, and social integration outside the university. Participants also completed a short semi-structured interview, in which a set of standardised questions were asked regarding the decision to drop out or persist, how the participant viewed their experience of university, how they related to the people they encountered, and how they felt they adapted to their course and student life in general.

Further questions could be asked by the interviewer to clarify or further develop a response. These participant responses were recorded using a cassette player. Also, if the participant lived further afield the questionnaire was posted out to them, and if possible an interview was conducted by phone.

Procedure

To find the target population (i.e. students who had voluntarily withdrawn from higher education) the experimenter asked students from a variety of courses to contact acquaintances from their subject that had dropped out. These students asked those who had withdrawn if they would mind participating in the study. If they agreed, their contact details were passed on to the experimenter, and a suitable time and place was chosen to conduct the interview and fill in the questionnaire. The questionnaire and interview always took place somewhere quiet and neutral – in a café or bar, or by phone. In order to match the pairs, the experimenter used the student who was acquainted with the withdrawer if they were suitable through the matching criteria, and similar in background information. Otherwise, the student was asked to think of a number of people from their course who would be likely to match the student withdrawer as closely as possible. These students were then approached to take part in the experiment, and the closest match was selected.

The participant was asked to fill in a Participant Consent and Information Form, in which they were briefed regarding the nature and intention of the research being conducted. At this point the questionnaire and interview were administered. Any questions asked during this process were answered accordingly.

Statistical Analysis

Due to the small sample size, there could be no assumption that the sample distribution was normal and so non-parametric statistics were used. In terms of data analysis, a simple approach was chosen: correlations were used to analyse the data. Each of the fifty-four Tinto questions were analysed using a Mann-Whitney test in an attempt to evaluate the degree of difference between the data in the two samples. Those questions found to have a significant degree of difference were verified by cross tabulating the sample data. Furthermore, those questions found to be significant and those found to be of borderline significance were further analysed using a 1-sample Wilcoxon signed ranks test.

Results

Of the 54 items analysed, 24 were found to be significantly different to a value of 0.05 or less using the Mann Whitney test. When analysed using the Wilcoxon signed ranks test, this number fell to 16.

These 16 significant items appeared to be quite consistent with the hypotheses made in the Tinto model. Significant differences were yielded for both social and academic items: and differences between voluntary withdrawers and persisters were found to be most common in items relating to positive course attitude, attitudes to learning, social interactions with the staff, differing perspectives on the experience they had on the course and how their extracurricular socialising suited university life.

Previous literature revealed that there are novel variables that have not been fully incorporated into Tinto's theory but which appear to have an impact on student departure. Before the questionnaire items are further interpreted, some background statistics relating to these items, as a frame of reference for their interpretation may be useful. Firstly, of the 30 participants within the study, only two claimed "student debt is a major worry" (one persister and one withdrawer). This does not suggest that students don't have a great deal of debt, but it does suggest student debt does not play a major role in student decisions to drop out or stay on at university.

Secondly, participants were asked to respond to the question: "How important was it to you to graduate from your course?" Interestingly, of the 15 persisters, 12 selected the top choice 'very', 2 the second highest choice 'quite', and just 1 was 'unsure'. In contrast, of the 15 withdrawers, only 5 selected 'very', 6 chose 'quite', 3 chose 'unsure' and 1 selected the bottom choice 'not at all important'.

In addition, another useful question regarding type and frequency of sociability within university was included. This stated: "On average, how many times did you take part in any social activities with people from your course or the institution you attended (e.g. clubs or student societies, sports, trips to coffee shops, pubs, clubs, etc)?" This was interesting as the average student persister claimed to socialise more (4 social activities per week) than the average student withdrawer (3.66 social activities), but only by a small degree. However, in terms of range, all persisters socialised with course-mates at least once a week, and only one reported '7+' social activities per week. In contrast, 3 withdrawers reported 7+ social activities per week, whilst two reported 0 social activities with course-mates.

Table One is a summary of the questionnaire items that were found to be significant, and the degree to which they were found to be significant.

Table One

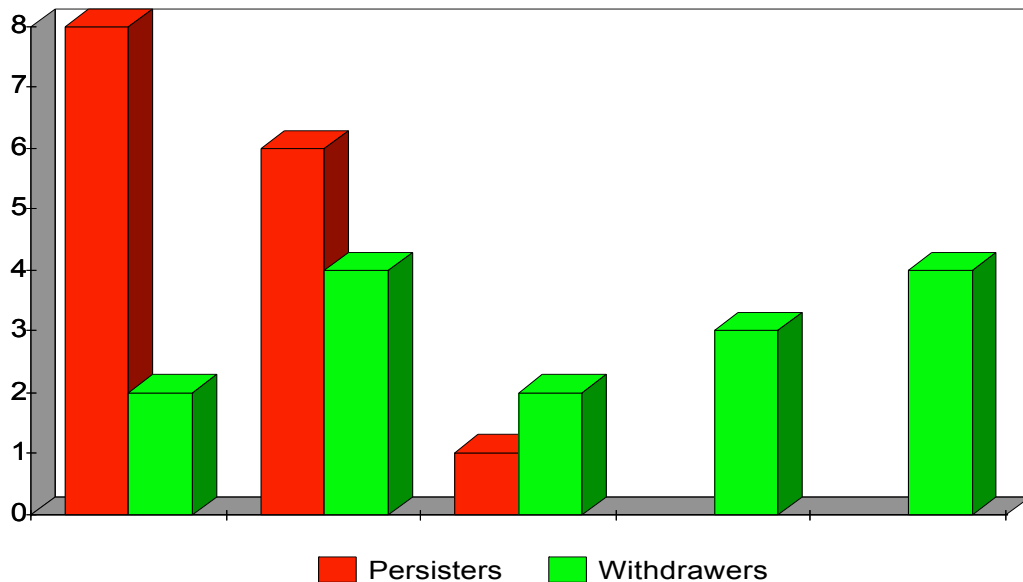
	Mann-Whitney Test and CI: Rank Test:	Wilcoxon Signed
3) Studying my degree was useful.	The test is significant at 0.0053	Test significant at 0.014
7) I liked to get to know staff at the university.	The test is significant at 0.0020	Test significant at 0.005
8) I found the course interesting.	The test is significant at 0.0025	Test significant at 0.007
11) I enjoyed studying my course.	The test is significant at 0.0066	Test significant at 0.004
14) I got good enough marks.	The test is significant at 0.0035	Test significant at 0.011
15) I felt comfortable being a student at the university.	The test is significant at 0.0031	Test significant at 0.013
18) Studying the course was just like I expected it to be.	The test is significant at 0.0078	Test significant at 0.025
19) Getting to know students and staff was beneficial to me.	The test is significant at 0.0253	Test significant at 0.025
20) My preferred kinds of socializing did not fit well with university life.	The test is significant at 0.0424	Test significant at 0.034
27) I felt comfortable around campus, the department, in lectures, etc.	The test is significant at 0.0026	Test significant at 0.024
28) I felt comfortable approaching staff whenever I needed to.	The test is significant at 0.0431	Test significant at 0.018
30) I fitted in with other students in the class.	The test is significant at 0.0411	Test significant at 0.038
37) I felt better about myself as a student than I do doing something else.	The test is significant at 0.0369	Test significant at 0.037
41) I wanted to learn as much as possible from the course.	The test is significant at 0.0083	Test significant at 0.010
51) I wanted to master completely the materials presented on the course.	The test is significant at 0.0016	Test significant at 0.003
52) I wanted to do well in my course to show my ability to my friends and family.	The test is significant at 0.0254	Test significant at 0.016

These questionnaire items can be sorted into the two Tinto subsets of integration: social and academic. Items 3, 8, 11, 14, 18, 27, 37, 41 and 51 are all perceived as being indications of academic integration. Social integration is best split into two further subsets of departmental social integration (consisting of items 7, 15, 19, 28, and 30) and peer extracurricular social integration (consisting of items 20 and 52).

A number of responses to these questions are displayed graphically below, to emphasize the difference in responses between the two experimental groups.

Graph One (Q. 8)

I found the course interesting



Key

(Note responses were recorded on a five item scale: 1 = not true of me at all, 5 = Very true of me)

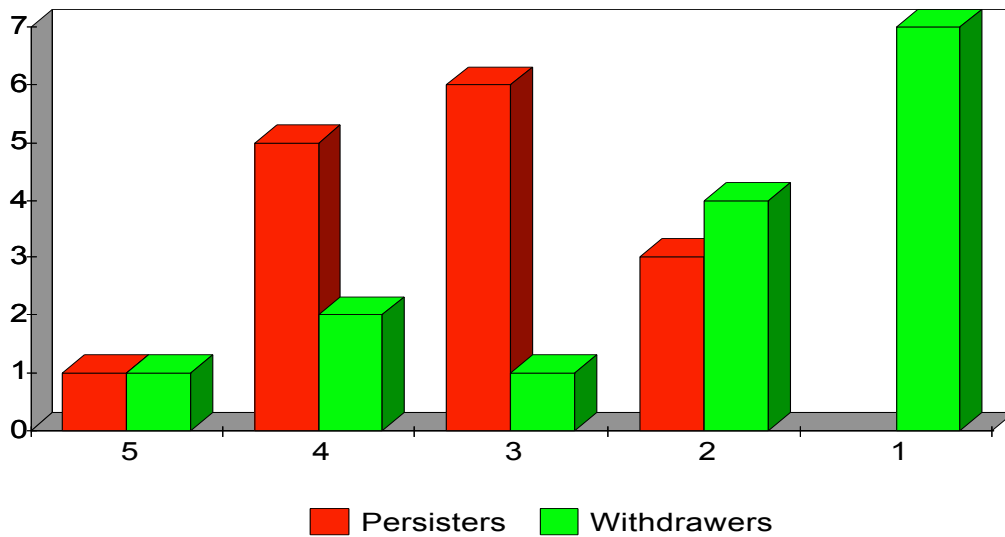
Persister responses (%)	Withdrawer responses (%)
3 6.67	1 26.67
4 40.00	2 20.00
5 53.33	3 13.33
	4 26.67
	5 13.33

Graph One clearly indicates that there is a huge discrepancy between how those who chose to stay on in higher education viewed their course and how those who withdrew from higher education viewed it. 53.33% of all persister responses believed the course

to be very interesting to them, whereas only 13.33% of the withdrawers believed the statement to be very true of them.

Graph Two (Q. 18)

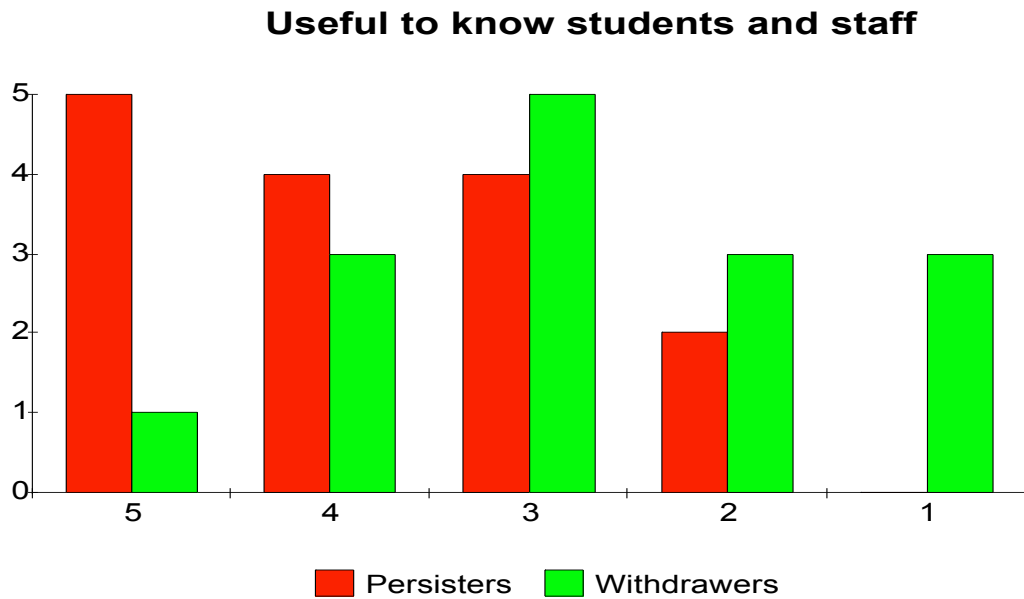
Course was as I thought it would be



Key	
Persister responses (%)	Withdrawer responses (%)
2 20.00	1 46.67
3 40.00	2 26.67
4 33.33	3 6.67
5 6.67	4 13.33
	5 6.67

Graph Two indicates that neither experimental group believed that the course was especially as they had expected, but whereas the persisters answered the item in a fairly neutral way, almost half of the withdrawers (46.67%) indicated that the course was not at all as they had expected.

Graph Three (Q. 19)

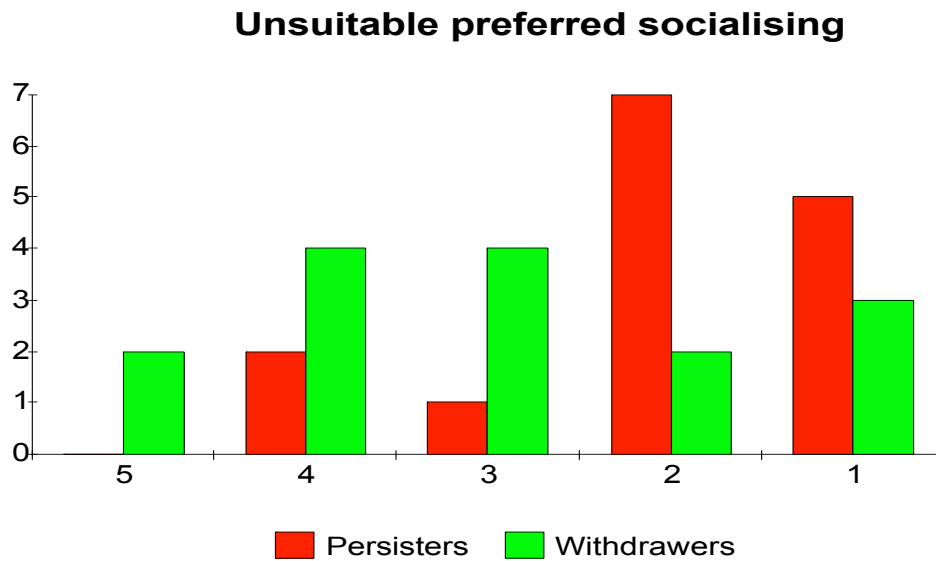


Key

Persister responses (%)	Withdrawer responses (%)
2 13.33	1 20.00
3 26.67	2 20.00
4 26.67	3 33.33
5 33.33	4 20.00
	5 6.67

Responses here are again telling of a different attitude found in the withdrawers in contrast to persisters. Only 6.67% of the withdrawers thought it was very beneficial to get to know the students and staff they came into contact with, compared to 33.33% of the persisters. The range of the responses was also quite divergent, with no persisters indicating a very negative response, but 20% of withdrawers doing so.

Graph Four (Q. 20)



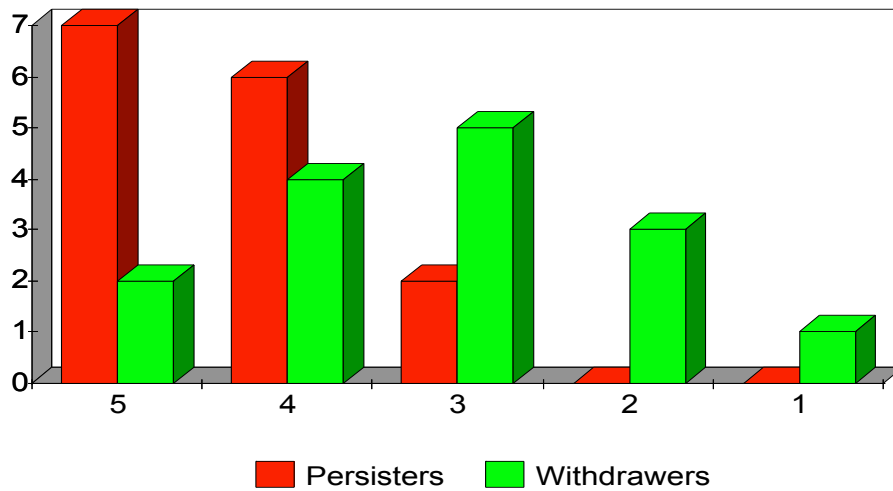
Key

Persister responses (%)		Withdrawer responses (%)	
1	33.33	1	20.00
2	46.67	2	13.33
3	6.67	3	26.67
4	13.33	4	26.67
		5	13.33

Despite the findings of the background questions, that both persisters and withdrawers specified that they socialized with course-mates and students a similar number of times a week, this questionnaire item implies that the way they choose to socialize may be substantially different. The persister responses are much more skewed to one side than the withdrawer responses, indicating that persister methods of socializing fit in a more conducive manner with university life.

Graph Five (Q. 41)

I wanted to learn as much as possible



Key

Persister responses (%)		Withdrawer responses (%)	
3	13.33	1	6.67
4	46.67	2	20.00
5	40.00	3	33.33
		4	26.67
		5	13.33

This graph indicates very different attitudes within the two experimental groups with regards to how they perceived their work. Persisters appear to be much more driven to simply learn the subject that they have chosen to study, whereas withdrawers appear to have a much more normal distribution in reference to the question, with some withdrawers wanting to learn as much as possible, the majority being somewhat indifferent to the idea, and a number of withdrawers being quite counter to the idea of learning as much as possible from their course.

Discussion

The findings of this study do offer support for the experimental hypothesis, that students who voluntarily withdrew from their course will feel less integrated into the university both socially and academically than those students who chose to persist in their studies. The 16 significant items appeared to be quite consistent with the hypotheses made in the Tinto model. The concepts relating to both academic and social integration wielded statistically significant differences between voluntary withdrawers and persisters in items relating to positive course attitude, attitudes to learning, social interactions with the staff, differing perspectives on the experience they had on the course and how their extracurricular socialising suited university life.

The findings of this study add directly to our knowledge and understanding of the role of integration and its importance in the decision to drop out of higher education. The sample is not taken from just one subject (e.g. Law), but consists of a number of participants from a number of different courses, so results can be deemed representative of a general overview of withdrawer and persister attitudes to university.

Discrepancies between persister and withdrawer attitudes can be clearly seen in relation to the enthusiasm and expectations the students had concerning the course. Highly significant results found for the questions “8) I found the course interesting”, “11) I enjoyed studying my course”, “18) Studying the course was just like I expected it to be”, and “41) I wanted to learn as much as possible from the course” are a clear indication of this. Furthermore, responses from the semi-structured interviews follow a similar avenue. Persister comments were of the ilk: “Yes I do work hard, but I like it when I do well”, “I really like my course: it is challenging, but practical, and enjoyable”. In contrast, those who withdrew had a much more negative attitude: “I

didn't want to keep doing something I hated." Another common theme was that the withdrawer really didn't have a good idea of what they had applied for. One withdrawer, who studied Computer Engineering, only found out once the course began that "only one sixth of the course was to do with computing, the rest was about circuitry and engineering." An engineer said "the course was not what I expected it to be – after two years studying I began to realise that I wasn't learning about anything that interested me, and I didn't think that the degree would qualify me for the job I wanted." It may be that when applying for a course, not enough practical information and guidance is given to the student, with the result that a sizable minority of students end up studying something they dislike. This would obviously play a significant role in impairing this type of students' ability to integrate successfully into the university on an academic level.

Highly significant differences were also uncovered in attitudes towards interaction with the staff. Responses to the items "7) I liked to get to know staff at the university", "19) Getting to know students and staff was beneficial to me" were very positive for those who persisted at university, but negative for those who withdrew. This trend was also visible qualitatively. A withdrawer (from English Lit) said "I had an advisor but didn't see him . . . I actually didn't even know where his office was!" Similarly, a withdrawer (Politics) said members of the department were "approachable I'm sure, but I never tested that." Many persisters said that they felt intimidated by many lecturers, "Dr. this and Professor that ..." and there could be a professional arrogance about them, but that they "quite liked them regardless" and spoke to them when and as necessary. A proportion of persisters also said that they came to regard either a tutor or someone from their department as a 'mate' or friend, whereas no withdrawer seemed to build up this level of relationship with staff. Again

this withdrawer attitude would only hamper their integration into university according to Tinto's model.

Question 20, "My preferred kinds of socializing did not fit well with university life" also seems to be particularly telling. The background information questionnaire revealed there did not appear to be a difference between the two experimental groups in terms of sociability, but this item implies that the ways that the two groups socialized were probably different. It could be that those who withdrew participated in pastimes that were not conducive to university life, whereas those who persisted socialized through activities that could be incorporated into a lifestyle more compatible with University. Information collected on this area is not as clear as information collected on academic integration, but again the interviews revealed a glimpse into the differing social behaviours of the two groups. Typically those who withdrew from university reported that they enjoyed the "freedom of life, living away from home in a big city ... there was a lot to do". One participant claimed "I spent every day with my pals [from halls], drinking, smoking ... playing pool and computer games!" A number of subjects also related that they had become involved in romantic relationships that had a detrimental effect on their academic performance, and this was a factor in their decision to drop out. A number of participants from the withdrawer group reported that walking away from the social side of university life was the hardest part in their drop out decision. Those who persisted reported different social behaviours, such as making friends at university clubs or societies, and whilst they made friends, there was much more a tendency for them to meet at a pre-arranged time to do a pre-arranged activity than to simply always be around their friends.

Equally, it is important to examine the variables that were not found to be significant. It seems that both experimental groups had similar attitudes towards learning skills (e.g. 5] The course prevented me from engaging in learning activities I like, 10] I had the skill to take effective notes in class), and factors of social integration with peers (e.g. 22] I felt I made friends at university, 23] I felt I knew how to talk to other students). There was no significant difference between the experimental groups in learning skills and their respective abilities to socialize with peers. This implies that withdrawers harbor academic potential and social ability, but that on their own these characteristics are not enough to allow successful integration into university life.

Several limitations to this research moderate the conclusions and implications of the studies' findings. Firstly, there were shortcomings in the selection method used in finding subjects who had voluntarily withdrawn from their course and in gaining their participation in the study. The finding of participants is an immensely laborious process, and it would be beneficial to achieve better methods of unearthing subjects, and also matching them to other subjects. The possibility of self-selection is also an issue, as a number of subjects approached refused to participate in the experiment, particularly females. Fifteen withdrawers eventually participated whereas a total of 23 subjects were approached (five more females and three more males). Therefore it is possible that those who chose to participate in the sample are not representative of the withdrawer population as a whole. Particularly, it was difficult to obtain female participants – this may be due to the sensitive subject matter the study involved – for some individuals it seems their decision to drop out may be associated with a feeling of shame, or failure (this was sometimes posited or alluded to as a reason for not

taking part). In future, to better validate the experimental results a much larger and more diverse sample of the withdrawer population should be taken. Also, future study designs may consider the use of a female researcher (this study was undertaken using only one male researcher). It may be that female participants would feel more comfortable talking to a same-sex researcher when discussing a sensitive issue.

Secondly, during the qualitative interview stage of the study, two of the male withdrawers revealed that within one year of dropping out of their courses they were diagnosed as suffering from clinical depression. One could argue that this diagnosis could be a cause or an effect of their decision to drop out, or any number of other environmental factors, but in such a small sample this discovery again undermines how representative of the sample obtained for the study is of the population of being studied. It is possible that a certain number of withdrawal decisions are made due to health problems, although no research has been conducted into this possibility. In future, it would be useful to include questions regarding the subjects' general health in the background information obtained for the individual.

Thirdly, whilst the Tinto questionnaire used in the study has been used in a previous study (Black, 2003), it can only be considered exploratory: in future it would be useful to establish a more validated measure of Tinto's model, firstly to refine the 54 items used, and secondly to obtain more authoritative findings.

Furthermore, caution must be observed in placing any weighting on the factors found to vary between the experimental groups as the statistical analysis of the data involved only non-parametric tests. In future research it would be useful to be able to determine the relative contribution that each item makes to decisions to drop out or remain in university. A larger sample and more robust statistical analysis, such as a

multivariate analysis of variance (to determine interactions between independent variables) would be beneficial.

The purpose of this study was to directly assess Tinto's model of student integration with a sample of actual student dropouts and to evaluate the validity of its claims, and to attempt to discern differences between the sample of voluntary student withdrawals and the sample of students who chose to persist through their courses. The Tinto integration questionnaire was adequate in identifying a number of probable differences between the experimental groups and the results of the study endorse further and more expansive research into this area.

However, the Tinto integrational model does not necessarily explore all possible reasons for drop out decisions, and as a result it was decided to include a number of other scales and assessments within the study, to evaluate other factors that potentially influence drop out decisions.

Is Academic Confidence a contributing factor to Student Drop Out?

Introduction

Previously, the Tinto model of student integration was considered. However, a rather substantial body of research suggests that students 'interactions' with the college environment are not independent of the particular background characteristics that they bring to college. An important issue in the topic of integration to higher education is academic self-efficacy. This section of the experiment is guided by the work of Bandura (1977, 1993) into the topic of self-efficacy, and is based on the work of Sander & Sanders (2003), who constructed an Academic Confidence Scale (ACS). This scale has been used in this study to determine how differing levels of confidence could explain differences in student expectations of higher education.

Self-efficacy has been defined by Bandura (1986) as "people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performance", and by Pajares (2000) as the confidence that people have in their ability to do the things that they try to do. Academic confidence is the term for self-efficacy within the academic context, and is proposed as a mediating variable between the individuals' inherent abilities and the opportunities afforded by the academic environment of higher education. The ACS may be useful in determining how students were coping academically with their course as ACS scores are determined by previous academic performance.

It is possible that students who withdraw from university do so because they lack confidence in their ability to do well on their course, and those students who persist in their studies do so because they have confidence in their ability. The experimental hypothesis is that there will be a significant difference in academic confidence

between the two groups, with greater academic confidence found in the persisting students group.

Method

Our sample of 15 voluntary withdrawers and 15 persisting students completed Sander & Sanders Academic Confidence Scale as part of the questionnaire they were given. As participants were matched for course subject and the number of Highers or A-levels undertaken, the matched pairs were regarded as of equal academic ability to complete the course (none of the subjects had been admitted to their course via clearing – all gained the requisite grades for entry). Therefore, any differences found in academic confidence should be for reasons other than lack of academic ability.

Results

Fifteen student withdrawers and fifteen persisting students completed the ACS. Overall, a significant difference between the withdrawers and the persisters was found; persisting students reported greater levels of academic confidence than student withdrawers to a value of $p < 0.041$. This was determined using a Wilcoxon signed ranks test, the results of which are displayed in Table One below.

Table One
Wilcoxon Signed Rank - Total Difference

	N	N for Test	Statistic	Wilcoxon P value	Estimated Median
Diff_Tot	15	11	4.0	0.041	-1.000

The differences in academic confidence were specifically examined for each of the 24 statements using a Mann Whitney test. Sander & Sanders (2002) factor analysed their data – this was useful in determining 6 factors relating to academic confidence. Responses to the 24 questionnaire items were bundled into factors

relating to Studying, Understanding, Verbalising, Clarifying, Attendance, and Grades. Significant results are displayed below (each item has the factors that it relates to stated after it):

1. **Study effectively on your own in independent private study.** (Studying, Understanding). The Mann Whitney found this item significant to 0.0161, the Wilcoxon signed ranks at 0.018.
2. **Produce your best work under exam conditions.** (Grades). No significant difference was revealed between the two experimental groups for this item.
3. **Respond to questions asked by a lecturer in front of a full lecture theatre.** (Verbalizing). No significant difference between the two experimental groups was found for this item.
4. **Manage your workload to meet course deadlines.** (Studying, Understanding). The Mann Whitney test found this item significant at 0.0344, the Wilcoxon signed ranks at 0.041.
5. **Give a presentation to a small group of fellow students.** (Verbalizing). No significant difference was revealed between the two experimental groups for this item.
6. **Attend most taught sessions.** (Attendance, Clarifying). The Mann Whitney found this item significant at 0.0097, the Wilcoxon at 0.015.
7. **Attain good grades in your work.** (Grades). No significant difference was revealed between the two experimental groups for this item.
8. **Engage in profitable academic debate with your peers.** (Verbalizing, Clarifying). The Mann Whitney found significance to 0.0114, the Wilcoxon at 0.01.
9. **Ask lecturers about the material they are teaching in a one-to-one setting.** (Clarifying). The Mann Whitney test found this item significant to 0.0112, the Wilcoxon signed ranks test to 0.046.
10. **Ask lecturers about the material they are teaching during a lecture.** (Verbalizing). No significant difference was revealed between the two experimental groups for this item.

11. **Understand the material outlined and discussed with you by lecturers.** (Understanding, Grades). No significant difference was revealed between the two experimental groups for this item.
12. **Follow the themes and debates in lectures.** (Understanding). No significant difference was revealed between the two experimental groups for this item.
13. **Prepare thoroughly for tutorials.** (Studying, Understanding). A Mann Whitney test revealed a significant difference of 0.0343, the Wilcoxon signed ranks 0.011.
14. **Read the recommended background materials.** (Studying, Understanding). The Mann Whitney test found a significance of 0.0161, the Wilcoxon signed ranks 0.031.
15. **Produce coursework at the required standard.** (Studying, Understanding, Grades). No significant difference was revealed between the two experimental groups for this item.
16. **Write in an appropriate academic style.** (Understanding, grades). No significant difference was revealed between the two experimental groups for this item.
17. **Ask for help if you don't understand.** The Mann Whitney found this item significant at 0.0234, the Wilcoxon found it to be just over the level of significance, at 0.064.
18. **Be on time for lectures.** (Attendance). No significant difference was revealed between the two experimental groups for this item.
19. **Make the most of the opportunity of studying for a degree at university.** (Studying, Attendance, Grades). This item was found to be highly significant at 0.0019, and by the Wilcoxon 0.010.
20. **Pass assessments at the first attempt.** (Studying, grades). This item was also found to be highly significant by the Mann Whitney: 0.0002, and the Wilcoxon signed ranks determined significance at 0.004.
21. **Plan appropriate revision schedules.** (Studying). The Mann Whitney found this item significant at 0.0456, the Wilcoxon signed ranks at 0.037.
22. **Remain adequately motivated throughout.** (Studying). This item was found significant to 0.003 by the Mann Whitney, and 0.004 by the Wilcoxon signed ranks.

23. **Produce your best work in coursework assignments.** (Studying). This item is significant at 0.0133 by a Mann Whitney test, and 0.021 by a Wilcoxon signed ranks test.

24. **Attend tutorials.** (Attendance). This item is also significant: 0.0046 by a Mann Whitney test, and 0.009 by a Wilcoxon signed ranks test.

In summary, significant differences were found for the following items, and these relate into factors as follows:

Studying: 1, 4, 13, 14, 19, 20, 21, 22, and 23

Understanding: 1, 4, 13, and 14

Attendance: 6, 19, and 24

Grades: 19, 20

Verbalizing: 8

Clarifying: 6, 8, and 9

Persisting students were found to have significantly higher scores in all significant items. Withdrawers were not more academically confident in any of the items, but what is particularly of note is that they did match the persisting students in a number of the ACS items: 2, 3, 5, 7, 10, 11, 12, 15, 16, and 18.

Discussion

Firstly, we can conclude that the experimental hypothesis was supported: a significant difference in academic confidence was established between the two groups, with greater academic confidence found in the persisting students group. The ACS scores from the students participating in this study were affected by their previous academic performance, and this had an impact on how they believed they would perform academically in the future. Notably, withdrawers had similar confidence to persisters in a number of very academic items, such as confidence to “attain good grades in work”, to “understand material outlined and discussed by a

lecturer”, to “produce coursework at the required standard” and to “write in the appropriate academic style”. Contrast between the two groups is most obvious in their attitudes towards study: there seems to be a lack of confidence within the student withdrawer group that they could study effectively on their own, manage coursework to meet deadlines, prepare for tutorials adequately, and remain adequately motivated throughout. In other words, what seems to impair student withdrawers academically is not a lack of ability, but a general lack of planning with regard to their workload and how to effectively tackle it. This is supported by a difference in confidence to “pass assessments at the first attempt”. Obviously if student withdrawers have a relative inability to plan their workloads then they will feel less confident to pass exams and assessments than their persisting counterparts. In the future it would be valuable to verify this rather subjective interpretation of the results of this study through a larger study using factor analysis and more concise qualitative research, to validate whether this is the likely state of affairs.

Simply put, from the data obtained from this study it is likely that students who persist at university are not more capable academically than those who drop out, but that they are better able to organise themselves in a way that allows them to better meet the demands of the course.

In addition, as part of their investigation, Sander & Sanders suggested a ‘Gung-Ho! hypothesis’: essentially suggesting that students enter university with unrealistic expectations that get lowered through adverse experiences on the course.

From the results obtained from the Tinto study previously, it is apparent that student withdrawers are dissatisfied with their course and the grades they are awarded by the time they make the decision to withdraw from university, and so this seems to be a feasible proposition. A future longitudinal study upon a student population on

this topic could include the academic confidence scale to explore changes in student academic confidence over time - the results of those students who choose to drop out would be particularly interesting in evaluating their academic integration. Those with low academic confidence scores could also be targeted for extra guidance or revision classes, which may help to prevent a number of student dropout decisions.

This study is important as it demonstrates that the students' academic background prior to university does not necessarily predict how a student will perform academically once they begin higher education. Academic confidence is transitory and short-lived, and relies on the experience of most recent results. Decrements in academic confidence appear to correlate with the behaviour of student drop out.

Does an Individuals' Personality type play a role in voluntary student withdrawal?

Introduction

Research suggests that individuals often learn new information best using radically different methods to one another (e.g. Kolb, 1976; Jackson & Lawty-Jones, 1996). For example, a trainee plumber may have difficulty in understanding how to fix a boiler whilst they are taught about the various parts that may go wrong and how to fix them schematically (through books and diagrams), but once given an opportunity to go to a boiler and practically conduct the necessary work, he is able to understand the theory behind the problem much more clearly. Conversely, another trainee plumber may not understand the mechanics of a boiler until he learns the theory behind the practice. In other words, one individual learns best using one learning style, another learns best using another.

If an individual is taught predominately using a method they find hard to follow, they would be far more likely to quit their course before it was completed than another, despite the fact they may have had similar intelligence and skill levels. This principle may be at work in student attrition from higher education. Mismatches between teaching and learning styles are inevitable. When a student chooses a course they often have little idea of exactly what the course entails – the amount of one-on-one tuition they can expect to receive, the amount of tutorials, or the amount of lectures, and they also have little idea of the amount of personal work they will have to put in to succeed. If there is a mismatch between the way a course is taught, and the way an individual learns, or the amount of work necessary to complete the course, and the amount and quality of work the individual is willing to do, then that individual

will be more likely to voluntarily withdraw from their course than a student with an identical level of latent ability but a more appropriate method of learning.

A Myers-Briggs Type Indicator (MBTI) is the most widely used non-clinical measure of personality in the world. The two central concepts in MBTI are preference and type. Preference can be defined as “feeling most natural and comfortable with a particular way of behaving and experiencing.” For example, someone with a preference for Thinking (T) will be logical and reasoned in most situations, but will also behave in a Feeling (F) manner (its polar opposite) - more agreeable and appreciative - some of the time.

Four pairs of preferences are suggested by the theory. All characteristics are positive, and focus on strengths.

Characteristics associated with each preference

Extraversion (E). More outgoing and active.	Introversion (I). More reflective and reserved.
Sensing (S). More practical and interested in details and facts.	Intuition (N). More interested in possibilities and an overview.
Thinking (T). More logical and reasoned.	Feeling (F). More agreeable and appreciative.
Judging (J). More planning and coming to conclusions.	Perceiving (P). More easy-going and flexible.

A person's ‘type’ includes one from each pair of preferences – e.g. ENFJ. This allows 16 different types (Myers, 1980). The theory states that most of the time people behave consistently to their types, so their behaviour can be understood and predicted to an extent. There are aspects of learning style associated with each of these preferences, and these are listed below:

- E** Action, talk, trial and error
- I** Reflection, work privately
- S** Close observation of what happens; start with concrete and specific, ideas and theory later
- N** Theory first; links and possibilities; surges of interest
- T** Analysis and logic; critique
- F** Harmonious atmosphere; need to care about the topic

J More formal; organised; clear expectations and criteria

P Flexible, not routine; bursts of energy, work as play

(DiTiberio & Hammer, 1993)

The dominant function should in theory be the most prevalent experience. Thus an ESTJ is predicted to learn best using an ET style, an ISFP using an IF style. These learning styles vary dramatically. For example, brainstorming may be helpful and natural to some, but pointless and awkward to others. Type theory suggests that teachers, tutors and lecturers teach in their own personal styles, meaning mismatches between teaching and learning styles are inevitable.

Falt (2002) estimates that over 90% of student voluntary withdrawals are SP's², whilst only 2% of teachers are SP's. However, to date little research has been conducted into this area. Nicolson & Bayne (1990) noted that stressful aspects in work for SP's include when there is a 'monotonous environment', 'unclear or no information', and a 'lack of freedom'. When SP's encounter these stressors they were found to be likely to react through 'flight', "going own way" or even breakdown. It seems logical that voluntary withdrawal from university could occur as a result of these stress reactions.

Therefore, this study examined the hypothesis that students who withdrew from higher education would have an SP type.

Method

As part of the battery of questionnaires that were completed, participants took an MBTI test to determine their personality type, which is an indication of the individuals' learning preferences. The MBTI test results were analysed and interpreted using computer software.

Results

² An 'SP' is a Sensing and Perceiving individual, two of the eight preferences used in the MBTI model.

ESTJ 6 persisters, 2 withdrawers	ENFP 1 persister, 5 withdrawers	ISTJ 3 persisters, 1 withdrawer	INFP 0
ESTP 3 persisters, 2 withdrawers	ENFJ 1 withdrawer	ISTP 0	INFJ 0
ESFJ 1 persister, 1 withdrawer	ENTP 1 withdrawer	ISFJ 0	INTP 1 persister
ESFP 1 withdrawer	ENTJ 0	ISFP 1 withdrawer	INTJ 0

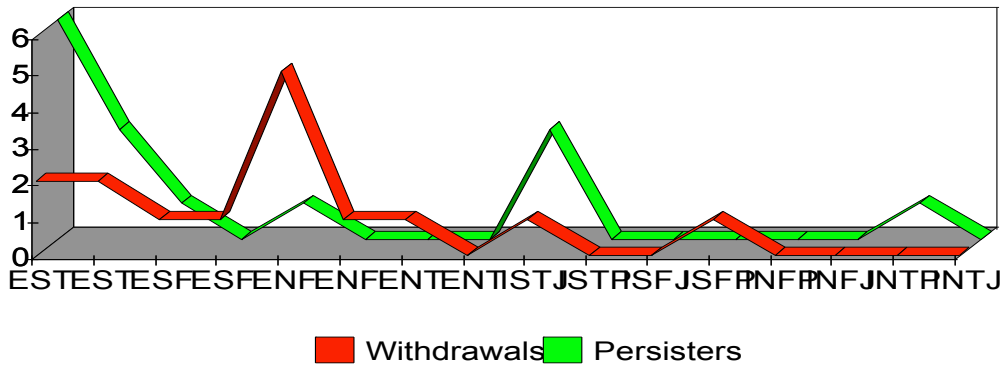
Six persisters were ascertained to be ESTJs, three were determined as ESTPs, and three more were considered ISTJs. These three personality types contain twelve out of the sample of fifteen persisters (80%).

Voluntary withdrawals scored highly as ENFPs (5), with lower tallies found as ESTJs (2) and ESTPs (2). These nine participants represent 60% of the sample of dropouts.

There seem to be no real trends regarding personality types within either group. What is perhaps of most note is the fact that from the sample of 30 participants, 24 are considered extroverted.

These results are displayed graphically below:

Graph One



HOW MANY SPs?

More specifically, out of the total sample of 30 participants, three students who chose to remain at university were found to be SP's, and four of the people who chose to drop out of university were found to be SP's. However, using such a small sample it would be inappropriate to try to claim any kind of conclusion regarding whether any one personality type is more likely to voluntarily drop out of university than other. The results do clearly reveal however, that within the sample nowhere near 90% of withdrawers were SP's – the actual figure was 26.6%. Of the sample of university persisters, 20% were adjudged to be SP's.

Discussion

This study is really little more than a pilot, in an attempt to evaluate a hypothesis that a subset of individuals with a certain personality type were more likely to find formal learning unsuited to them than others. No definite conclusions can be drawn from this data – a much larger sample would be necessary. Also, the participants selected have come from a range of different university courses, and as it seems likely

that people with different temperaments/personalities will be drawn to an array of different courses, any future research would best take account of learning styles research with regard to one specific course. For example, SP's may be more likely to go on to do engineering or fine arts, so in determining if one type of personality is more likely to drop out than another, it would first be important to study in depth if certain personality types are more likely to do a certain course. This study is possibly also limited in terms of sampling bias: as drop outs were acquired for the study through some form of continuing friendship with another person on their course, this insinuates that each student withdrawer is likely to be sociable to quite a high level, or they would not be a participant in the study. This may in particular explain the large proportion of extroverts found.

Furthermore, many more factors are involved in a person's choice of subject or course than personality, such as academic strengths, individual interests, advice, fashion, availability, and even luck. Similarly, the likelihood of a person choosing to withdraw from a course on the sole basis of a personality or learning style mismatch is unlikely. This view is supported in that no evidence has been uncovered to suggest that SPs are more likely to drop out of higher education. In addition, MBTI theory clearly states that a predisposition to one personality type or learning style does not mean that the individuals learning style cannot change and adapt to suit a given situation.

Does homesickness play a part in the decision to drop out of higher education?

Introduction

Most recently, a body of research in student well-being has begun to focus on homesickness and its effects. Van Vliet (2001) defines homesickness as “a state of distress characterised by adjustment difficulties and intense longing for home and ruminations for home after having left home.” Its symptoms include: separation anxiety, depression, nostalgia, loneliness, adjustment disorder, and grief. It needs to be taken seriously as it can lead to depression and anxiety, and can affect academic performance through cognitive failures, poor concentration, handing in work late and decrements in work quality (Stroebe et al, 2002). Such effects are potentially important as they may impair academic integration and academic confidence. Homesickness may also make it hard for an individual to socially integrate as negative mood states can lead to a lack of interest in other people, and a failure to capitalise on the opportunity to form relationships with others in social situations. As many as 50-75% of the general population have experienced homesickness at least once in their life (Fisher, 1989). Ten to fifteen percent have experienced it to the extent that it interferes with their daily activities. However, as yet homesickness has not been recognised as an emotional syndrome in its own right. It is acknowledged as a very normal occurrence in initially adapting to university life, but it is still to be determined whether it plays a particularly detrimental role in some student drop out decisions.

The Utrecht Homesickness Scale (UHS) is based on the concept of attachment. Attachment theory affords a starting point to understanding the foundations of homesickness through work conducted on interpersonal loss experiences, enabling us to understand how students are attached to those that they have left behind and to examine the ongoing nature of their bond with home (Bowlby, 1989). In conceptualising homesickness, researchers have included the missing of significant persons, but also additional events that relate to the home environment: missing particular sounds or smells, familiar foods, or daily routines. Van Tilberg (1997) and van Vliet (2001) identified five factors as important in assessing adaptation to the new environment: missing family, loneliness, missing friends, adjustment difficulties, and thoughts about home.

Around 10% of British students suffer from homesickness, and a further percentage are thought to suffer from homesickness on occasion. Highly relevant for

the student population is the question of whether gender differences could be a risk factor for homesickness. However, Brewin et al. (1989) report that homesickness is similarly prevalent amongst male and female students. Gender differences have been reported, but the disparity lies in the coping methods used – Brewin et al. (1989) reported that female students seek more social support than their male counterparts. Fisher (1989) reported that introverted individuals are also more likely to succumb to feelings of homesickness, and situationally, those who move a greater geographic distance away from their homes more frequently suffer from homesickness (accessibility is thought to be the underlying relationship in this trend).

Stroebe et al (2002) found a strong association indicating that homesickness affects distress or depression. The design made use of structural equation modelling, and analysis of the results led to the conclusion that homesickness appears to play a mediating role between stressor and outcome – i.e. levels of distress and depression. It is unlikely that homesick, depressed students who are maladapted to their new surroundings would be able to function well academically, or in other respects (Archer et al, 1998).

The hypothesis for this study is that there will be a significant difference between the levels of homesickness expressed by students who withdrew from university and student who persisted with their courses.

Method

Again, the matched pairs of students filled in the Utrecht Homesickness Scale questionnaire as one aspect of the questionnaire bundle they were asked to complete. Of the sample of 15 matched pairs, only 12 are included in this study as 3 of the matched pairs attended university whilst living at home. Data from these three pairs was not included as doing so would confound the homesickness results.

Results

Of 45 items incorporated into the UHS, only 4 were found to be statistically significant. Items 7, 9, 10 and 38 (in order, “feeling isolated from the rest of the world”, “finding it difficult to accommodate new daily routines”, “feeling unloved” and “feeling unable to cope with a new situation”). So few items being statistically different for the two groups intimates that there is no significant difference between the levels of homesickness experienced by the two groups i.e. one group was not more

affected than the other. As so many results were insignificant the statistical analysis has not been included here, but can be found in the appendices.

The final three questionnaire items (questions 46, 47, and 48) dealt directly with the participants' experience of homesickness. Question 47, "How often have you felt homesick in the past?" approached statistical significance. Item 48 asks with the most clarity of all the items how keenly the individual believes they have felt the affects of homesickness. It poses the question "How strongly have you felt homesickness at its worst?" Student withdrawers were found to have an average response of 2.5 for this item, whilst persisters were found to have an average response of 2.16. Note that the quantitative label for the value '2' was 'moderate', the label for '3' was 'strong'. Both groups therefore experienced homesickness from a moderate to a strong degree at its worst.

Student withdrawers did appear to feel homesickness at its peak more keenly, but there was not a huge discrepancy between the two experimental groups. The descriptive statistics for items 46, 47, and 48 within the questionnaire are displayed in Table One below. As no significant difference between the two experimental groups was found, the results below are shown in summation (incorporating both results from student persisters and withdrawers). Within the statistics, 0=not homesick; 1=rarely; 2= moderately homesick; 3=strongly homesick; 4=very strongly homesick.

Table One

Variable	N	N*	Mean	Median	TrMean	StDev
46) Homesick in the last 4 weeks?	24	6	0.917	0.500	0.818	1.176
47) Homesick in past?		24	6	1.292	1.000	1.273
						0.859
48) Homesick at its worst?		24	6	2.125	2.000	2.136
						1.116

The descriptive statistics in Table One show that whilst homesickness at its worst has been experienced to a fairly high degree, homesickness experienced in the past is on average viewed as rare, as is experience of homesickness in the last four weeks.

Discussion

No grounds were found to support the experimental hypothesis. Statistical analysis of the data revealed that there was very little difference between the two groups as to how homesickness affected students. The overall picture is that homesickness is quite

prevalent at some point or another for students. These results support the general findings of previous researchers e.g. Fisher, 1989; van Tilburg, 1998).

From information obtained through the semi-structured interviews, it appears that homesickness is not a phenomenon that pervasively affects the student population in negative ways, but rather that it affects specific people in specific ways. For example, one medical student withdrew from their course after only a few weeks of attending Glasgow University because he found his new way of life so alien, and felt so distant from the love of his friends and family. Accordingly, he “found it hard to talk to and meet new people”, and felt “confused, disorientated and lonely.”³ In direct contrast, other students reported minimal discomfort in adjusting to their new way of life, and in fact, seemed to thrive from the novelty of it all. One Geography student persistently reported “I felt liberated – able to start life in a new city, with new friends and so many possibilities!” When quizzed about his feelings towards home, he replied “yeah obviously I miss some stuff about home ... but I know it’ll still be there when I go back. It was time to move on.” Overall, most students reported discomfort of being in a new situation, away from old friends and their families, but they tended to find that they adapted quickly to the new situation and simply made the most of it.

Given that homesickness is associated with distress and depression, and that two males within the study were diagnosed as suffering from depression after dropping out of university, this study does imply that there may be some form of causal relationship. Stroebe et al. (2002) also found a strong link between homesickness affecting depression or distress, and suspected that homesickness acted as antecedent. However, this link cannot be substantiated any further with the data that has been collated for the study. This area could be investigated further in the future.

In terms of study limitations, again results have to be interpreted with caution due to the size of the sample used. All that can realistically be concluded is that to verify these results a larger sample is necessary to investigate the role of homesickness within university drop out behaviour. Many homesickness studies have been centred on experience of homesickness within the first year of university, and as this study involves a sample of students from various years, its results may be limited. It is difficult to cast the mind back to a point in time and honestly evaluate the emotions that you experience. Future research on homesickness would best be carried out

³ It must be noted however, that after withdrawing from his course, this participant was diagnosed as suffering from depression.

within a longitudinal design, to more accurately capture how a person feels at various points in time. Also, the pairs used within the study all came from the UK and attended university within the UK, and so while participants had to adjust to a new place, geographically they were unlikely to have to travel massive distances to attend university, and home was never really more than a matter of hours away. This also meant that culturally their way of life, food and customs were unlikely to be hugely different, and this may have aided their adjustment. Greater effects of homesickness may be found in samples of international students for example.

Research into the field of student homesickness is still relatively new, and there is a need to investigate its derivations, its expressions and symptoms, as well as its consequences. It is evident that students leaving home for university are particularly susceptible to homesickness, but the results of this study suggest that although students appear to suffer from its effects, it is not a major cause or contributor to the behaviour of student drop out except in exceptional cases.

Concluding Remarks

It is apparent that there is no specific cause of student drop out behaviour – rather it occurs for a wide range of reasons that interact with one another in a complex fashion. Nevertheless, this study has been particularly constructive as it is the first to practically apply Tinto’s model of student integration directly to a sample of student withdrawers, and suggests that student withdrawers are indeed less well integrated into university life than those who choose to remain on their courses. The other experimental hypotheses have also expanded research into the topic, and suggest useful avenues to explore in the future.

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Appendix I – Tinto study: Minitab Data

I did well in my studies in higher education.

Mann-Whitney Test and CI: Studies_P, Studies_W

Studies_ N = 15 Median = 4.000
Studies_ N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,2.001)
W = 278.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0620
The test is significant at 0.0507 (adjusted for ties)

Cannot reject at alpha = 0.05

The course demanded things of me I didn't like

Mann-Whitney Test and CI: Demanded, Demanded_W

Demanded N = 15 Median = 3.000
Demanded N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 208.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3297
The test is significant at 0.3167 (adjusted for ties)

Cannot reject at alpha = 0.05

*****Studying my degree was useful.

Mann-Whitney Test and CI: C61, C116

C61 N = 15 Median = 4.000
C116 N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
W = 297.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0075
The test is significant at 0.0053 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL3

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	P	Median	
TOTAL3	15	8	36.0	0.014	1.500

Tally for Discrete Variables: 3P, 3

3P	Percent	3	Percent
2	6.67	1	20.00
3	13.33	2	33.33
4	53.33	3	13.33
5	26.67	4	26.67
		5	6.67

University was not providing me with some of the conversations I want.

Mann-Whitney Test and CI: Conversations, Conversations_W

Conversa N = 15 Median = 2.000
Conversa N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000

95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
 W = 189.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0745
 The test is significant at 0.0670 (adjusted for ties)

Cannot reject at alpha = 0.05

The course prevented me from engaging in learning activities I like (e.g. essay writing, group work)

Mann-Whitney Test and CI: Prevented, Prevented_W

Prevente N = 15 Median = 2.000
 Prevente N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
 W = 198.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1647
 The test is significant at 0.1450 (adjusted for ties)

Cannot reject at alpha = 0.05

Getting a good grade in the course is important to me

Mann-Whitney Test and CI: Grade, Grade_W

Grade N = 15 Median = 5.000
 Grade_W N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 0.000
 95.4 Percent CI for ETA1-ETA2 is (0.001,2.000)
 W = 273.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0971
 The test is significant at 0.0603 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I liked to get to know the staff at the university

Mann-Whitney Test and CI: Knowstaff, Knowstaff_W

Knowstaf N = 15 Median = 3.000
 Knowstaf N = 15 Median = 1.000
 Point estimate for ETA1-ETA2 is 2.000
 95.4 Percent CI for ETA1-ETA2 is (1.000,3.000)
 W = 307.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0020
 The test is significant at 0.0013 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL7

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
		Statistic	Median
TOTAL7	15	13	86.0
			0.005
			1.500

Tally for Discrete Variables: 7P, 7

7P	Percent	7	Percent
1	6.67	1	73.33
2	20.00	2	6.67
3	33.33	3	6.67
4	13.33	4	6.67
5	26.67	5	6.67

*****I found the course interesting

Mann-Whitney Test and CI: Interesting, Interesting_W

Interest N = 15 Median = 5.000
Interest N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 2.000
95.4 Percent CI for ETA1-ETA2 is (1.000,3.000)
W = 306.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0025
The test is significant at 0.0016 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL8

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	P	Median	
TOTAL8	15	11	64.0	0.007	1.500

Tally for Discrete Variables: 8P, 8

8P Percent	8 Percent
3 6.67	1 26.67
4 40.00	2 20.00
5 53.33	3 13.33
	4 26.67
	5 13.33

The course blocked me from doing things that were important to my learning (e.g. have questions answered, have time to think before the next topic is presented)

Mann-Whitney Test and CI: Blocked, Blocked_W

Blocked N = 15 Median = 2.000
Blocked_ N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.000)
W = 209.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3401
The test is significant at 0.3199 (adjusted for ties)

Cannot reject at alpha = 0.05

I had the skill to take effective notes in lectures

Mann-Whitney Test and CI: Skill, Skill_W

Skill N = 15 Median = 4.000
Skill_W N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
W = 251.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4429
The test is significant at 0.4157 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I enjoyed studying my course

Mann-Whitney Test and CI: Enjoyed, Enjoyed_W

Enjoyed N = 15 Median = 4.000
Enjoyed_ N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (0.001,2.000)
W = 298.5

Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0066
The test is significant at 0.0050 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL11

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
TOTAL11	15	11	66.0 0.004 1.000

Tally for Discrete Variables: 11P, 11

11P	Percent	11	Percent
3	26.67	1	13.33
4	40.00	2	33.33
5	33.33	3	20.00
	4	26.67	
	5	6.67	

I felt comfortable with the amount of learning necessary for the course

Mann-Whitney Test and CI: Comfortable, Comfortable_W

Comforta N = 15 Median = 4.000
Comforta N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.999)
W = 252.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4186
The test is significant at 0.3985 (adjusted for ties)

Cannot reject at alpha = 0.05

I understood the material as well as I wanted to

Mann-Whitney Test and CI: Understood, Understood_W

Understo N = 15 Median = 4.000
Understo N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 226.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8035
The test is significant at 0.7824 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I got good enough marks

Mann-Whitney Test and CI: Goodmarks, Goodmarks_W

Goodmark N = 15 Median = 4.000
Goodmark N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is 2.000
95.4 Percent CI for ETA1-ETA2 is (0.000,2.000)
W = 300.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0055
The test is significant at 0.0035 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL14

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median

TOTAL14 15 10 53.0 0.011 1.500

Tally for Discrete Variables: 14P, 14

14P	Percent	14	Percent
2	6.67	1	26.67
3	20.00	2	33.33
4	53.33	3	6.67
5	20.00	4	33.33

*****I felt comfortable being a student at the university

Mann-Whitney Test and CI: Stuartuni, Stuartuni_W

Stuatuni N = 15 Median = 5.000
stuatuni N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (0.000,3.000)
W = 299.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0062
The test is significant at 0.0031 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL15

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	Statistic	P	Median
TOTAL15	15	10	52.5	0.013	1.500

Tally for Discrete Variables: 15P, 15

15P	Percent	15	Percent
4	26.67	1	20.00
5	73.33	2	13.33
		3	13.33
		4	26.67
		5	26.67

Apart from getting a qualification, there was no value in going to university

Mann-Whitney Test and CI: Novalue, Novalue_W

Novalue N = 15 Median = 2.000
Novalue_ N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 223.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.7089
The test is significant at 0.6924 (adjusted for ties)

Cannot reject at alpha = 0.05

Other students at the university were not worth getting to know

Mann-Whitney Test and CI: Otherstu, Otherstu_W

Otherstu N = 15 Median = 1.000
Otherstu N = 15 Median = 1.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.000)
W = 225.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.7716
The test is significant at 0.7353 (adjusted for ties)

Cannot reject at alpha = 0.05

*****Studying the course was just like I expected it to be

Mann-Whitney Test and CI: Expected, Expected_W

Expected N = 15 Median = 3.000
Expected N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (1.000,2.000)
W = 295.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0095
The test is significant at 0.0078 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL18

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon		Estimated	
	N	Test	Statistic	P	Median
TOTAL18	15	15	100.0	0.025	1.500

Tally for Discrete Variables: 18P, 18

18P	Percent	18	Percent
2	20.00	1	46.67
3	40.00	2	26.67
4	33.33	3	6.67
5	6.67	4	13.33
		5	6.67

*****Getting to know students and staff was beneficial to me

Mann-Whitney Test and CI: Beneficial, Beneficial_W

Benefici N = 15 Median = 4.000
Benefici N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.001,2.000)
W = 285.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0294
The test is significant at 0.0253 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL19

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon		Estimated	
	N	Test	Statistic	P	Median
TOTAL19	15	8	34.5	0.025	1.000

Tally for Discrete Variables: 19P, 19

19P	Percent	19	Percent
2	13.33	1	20.00
3	26.67	2	20.00
4	26.67	3	33.33
5	33.33	4	20.00
		5	6.67

*****My preferred kinds of socializing did not fit in well with university life

Mann-Whitney Test and CI: Preferredsoc, Preferredsoc_W

Preferre N = 15 Median = 2.000
Preferre N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000

95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
 W = 184.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0488
 The test is significant at 0.0424 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL20

Test of median = 0.000000 versus median not = 0.000000

	N for N	Wilcoxon Test	Statistic	Estimated P	Median
TOTAL20	15	12	11.5	0.034	-1.000

Tally for Discrete Variables: 20P, 20

20P	Percent	20	Percent
1	33.33	1	20.00
2	46.67	2	13.33
3	6.67	3	26.67
4	13.33	4	26.67
		5	13.33

I liked the conversations I had with other students at the university
Mann-Whitney Test and CI: Likedcon, Likedcon_W

Likedcon N = 15 Median = 4.000
 Likedcon N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 269.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1300
 The test is significant at 0.1176 (adjusted for ties)

Cannot reject at alpha = 0.05

I felt I made friends at university
Mann-Whitney Test and CI: Madefriends, Madefriends_W

Madefrie N = 15 Median = 4.000
 Maderfri N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 260.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2628
 The test is significant at 0.2454 (adjusted for ties)

Cannot reject at alpha = 0.05

I felt I knew how to talk to other students
Mann-Whitney Test and CI: Howtotalk, Howtotalk_W

Howtotal N = 15 Median = 4.000
 Howtotal N = 15 Median = 4.000
 Point estimate for ETA1-ETA2 is 0.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,2.000)
 W = 249.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4937
 The test is significant at 0.4763 (adjusted for ties)

Cannot reject at alpha = 0.05

I made as many friends as I wanted at university
Mann-Whitney Test and CI: Frienswant, Frienswant_W

Frienswa N = 15 Median = 4.000
 Friendsw N = 15 Median = 4.000
 Point estimate for ETA1-ETA2 is -0.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,2.000)
 W = 238.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8195
 The test is significant at 0.8116 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I had conversations with the staff at university

Mann-Whitney Test and CI: Constaff, Constaff_W

Constaff N = 15 Median = 3.000
 Constaff N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 283.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0381
 The test is significant at 0.0316 (adjusted for ties)

I liked the conversations I had with the staff at university

Mann-Whitney Test and CI: Likedconstaff, Likedconstaff_W

Likedcon N = 15 Median = 3.000
 Likedcon N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 273.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0971
 The test is significant at 0.0868 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I felt comfortable around campus, the department, in lectures, etc.

Mann-Whitney Test and CI: Comfortcampus, Comfortcampus_W

Comfortc N = 15 Median = 5.000
 Comfortc N = 15 Median = 4.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (1.000,2.000)
 W = 303.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0037
 The test is significant at 0.0026 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL27

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated	
	N	Test	P	Median
	Statistic			
TOTAL27	15	14	89.0	0.024 1.500

Tally for Discrete Variables: 27P, 27

27P	Percent	27	Percent
3	26.67	1	13.33
4	13.33	2	26.67
5	60.00	3	6.67
		4	53.33

*****I felt comfortable approaching staff whenever I needed to

Mann-Whitney Test and CI: Approachedstaff, Approachedstaff_W

Approach N = 15 Median = 4.000
 Approach N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 280.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0488
 The test is significant at 0.0431 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL28

Test of median = 0.000000 versus median not = 0.000000

	N for N	Wilcoxon Test Statistic	Estimated P	Median	
TOTAL28	15	11	60.0	0.018	1.000

Tally for Discrete Variables: 28P, 28

28P	Percent	28	Percent
1	13.33	1	26.67
2	13.33	2	46.67
3	13.33	3	6.67
4	33.33	4	6.67
5	26.67	5	13.33

Studying my career would have led to the job or career that I want
Mann-Whitney Test and CI: Ledtojob, Ledtojob_W

Ledtojob N = 15 Median = 4.000
 Ledtojob N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (0.000,1.999)
 W = 276.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0712
 The test is significant at 0.0633 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I fitted in with other students in the class

Mann-Whitney Test and CI: Fittedin, Fittedin_W

Fittedin N = 15 Median = 4.000
 Fittedin N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (0.000,2.000)
 W = 279.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0564
 The test is significant at 0.0411 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL30

Test of median = 0.000000 versus median not = 0.000000

	N for N	Wilcoxon Test Statistic	Estimated P	Median	
TOTAL30	15	12	66.0	0.038	1.000

Tally for Discrete Variables: 30P, 30

30P	Percent	30	Percent
3	40.00	1	6.67
4	53.33	2	40.00

5 6.67 3 13.33
4 40.00

When I was with other people outside the university I felt embarrassed I was a student

Mann-Whitney Test and CI: Embarrassed, Embarrassed_W

Embarrass N = 15 Median = 1.000
Embarrass N = 15 Median = 1.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,-0.000)
W = 227.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8357
The test is significant at 0.7978 (adjusted for ties)

Cannot reject at alpha = 0.05

Going to university fitted in with the type of person I wanted to be

Mann-Whitney Test and CI: Typeofperson, Typeofperson_W

Typeofpe N = 15 Median = 4.000
Typeofpe N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.999)
W = 237.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8682
The test is significant at 0.8597 (adjusted for ties)

Cannot reject at alpha = 0.05

I wanted to get on with other people outside the university

Mann-Whitney Test and CI: Getonwithothers, Getonwithothers_W

Getonwit N = 15 Median = 4.0000
Getonwit N = 15 Median = 4.0000
Point estimate for ETA1-ETA2 is -0.0000
95.4 Percent CI for ETA1-ETA2 is (0.0000,0.9999)
W = 261.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2455
The test is significant at 0.2053 (adjusted for ties)

Cannot reject at alpha = 0.05

People outside the university tended to accept my going there as worthwhile

Mann-Whitney Test and CI: Worthwhile, Worthwhile_W

Worthwhi N = 15 Median = 5.000
Worthwhi N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (0.000,1.000)
W = 259.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2717
The test is significant at 0.2288 (adjusted for ties)

Cannot reject at alpha = 0.05

My being at university was impressive to others

Mann-Whitney Test and CI: Impressive, Impressive_W

Impressi N = 15 Median = 4.000
Impressi N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
W = 267.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1585

The test is significant at 0.1412 (adjusted for ties)

Cannot reject at alpha = 0.05

I fitted in with other students at the university

Mann-Whitney Test and CI: Fittedwithstu, Fittedwithstu_W

Fittedwi N = 15 Median = 4.000
Fittedwi N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.001,2.000)
W = 261.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2372
The test is significant at 0.2169 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I felt better about myself as a student than I do doing something else

Mann-Whitney Test and CI: Feltbetter, Feltbetter_W

Feltbett N = 15 Median = 4.000
Feltbett N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.999)
W = 282.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0421
The test is significant at 0.0369 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL37

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	Statistic	P	Median
TOTAL37	15	10	48.5	0.037	1.000

Tally for Discrete Variables: 37P, 37

37P	Percent	37	Percent
1	6.67	1	33.33
2	6.67	2	20.00
3	33.33	3	26.67
4	40.00	4	6.67
5	13.33	5	13.33

Going to university made me fit in better in life outside the university

Mann-Whitney Test and CI: Lifeoutsideuni_W, Lifeoutsideuni_W

Lifeouts N = 15 Median = 2.000
Lifeouts N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 232.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 1.0000
The test is significant at 1.0000 (adjusted for ties)

Cannot reject at alpha = 0.05

I felt comfortable telling others I went to my institution

Mann-Whitney Test and CI: Comfortothers, Comfortothers_W

Comforto N = 15 Median = 4.000
Comforto N = 15 Median = 4.000

Point estimate for ETA1-ETA2 is -0.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
 W = 250.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4807
 The test is significant at 0.4379 (adjusted for ties)

Cannot reject at alpha = 0.05

I often thought to myself 'What if I do badly?'

Mann-Whitney Test and CI: Dobadly, Dobadly_W

Dobadly N = 15 Median = 4.000
 Dobadly_ N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.999)
 W = 268.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1409
 The test is significant at 0.1266 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I wanted to learn as much as possible from this course

Mann-Whitney Test and CI: Learnasmuch, Learnasmuch_W

Learnasm N = 15 Median = 4.000
 Learnasm N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
 W = 294.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0114
 The test is significant at 0.0083 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL41

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
		Statistic	Median
TOTAL41	15	13	83.0
			0.010
			1.000

Tally for Discrete Variables: 41P, 41

41P	Percent	41	Percent
3	13.33	1	6.67
4	46.67	2	20.00
5	40.00	3	33.33
		4	26.67
		5	13.33

My goal was to get better grades than other students on the course

Mann-Whitney Test and CI: Bettergrade, Bettergrade_W

Bettergr N = 15 Median = 3.000
 Bettergr N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 1.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,1.999)
 W = 254.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3837
 The test is significant at 0.3689 (adjusted for ties)

Cannot reject at alpha = 0.05

I wanted to get by doing as little as possible on the course

Mann-Whitney Test and CI: Littleasposs, Littleasposs_W

Littleas N = 15 Median = 2.000
Littleas N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 207.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2998
The test is significant at 0.2854 (adjusted for ties)

Cannot reject at alpha = 0.05

(Very close)I worried about getting a bad grade

Mann-Whitney Test and CI: Badgrade, Badgrade_W

Badgrade N = 15 Median = 4.000
Badgrade N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,3.000)
W = 276.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0745
The test is significant at 0.0544 (adjusted for ties)

Cannot reject at alpha = 0.05

It was important for me to understand course content thoroughly

Mann-Whitney Test and CI: Understandcourse, Understandcourse_W

Understa N = 15 Median = 4.000
Understa N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.999)
W = 258.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2998
The test is significant at 0.2803 (adjusted for ties)

Cannot reject at alpha = 0.05

I just wanted to do what I was supposed to do on the course and get it done

Mann-Whitney Test and CI: Dowhatsupposedto, Dowhatsupposedto_W

Dowhatsu N = 15 Median = 3.000
Dowhatsu N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 228.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8682
The test is significant at 0.8630 (adjusted for ties)

Cannot reject at alpha = 0.05

My fear of performing poorly on the course motivated me to work

Mann-Whitney Test and CI: Fear, Fear_W

Fear N = 15 Median = 4.000
Fear_W N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
W = 268.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1466
The test is significant at 0.1304 (adjusted for ties)

Cannot reject at alpha = 0.05

I hoped to gain a broader and deeper understanding of the topic my course studied

Mann-Whitney Test and CI: Deepunderstanding, Deepunderstanding_W

Deepunde N = 15 Median = 4.000
Deepunde N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
W = 253.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3952
The test is significant at 0.3647 (adjusted for ties)

Cannot reject at alpha = 0.05

I wanted to do things as easily as possible so that I didn't have to work too hard

Mann-Whitney Test and CI: Easyasposs, Easyasposs_W

Easyaspo N = 15 Median = 3.000
Easyaspo N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 233.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.9835
The test is significant at 0.9830 (adjusted for ties)

Cannot reject at alpha = 0.05

*****I just wanted to avoid doing poorly on my course

Mann-Whitney Test and CI: Aavoidpoor, Aavoidpoor_W

Aavoidpoo N = 15 Median = 4.000
Aavoidpoo N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (0.000,2.000)
W = 279.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0564
The test is significant at 0.0480 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL50

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
TOTAL50	15	10	45.5 0.074 0.5000

Tally for Discrete Variables: 50P, 50

50P Percent	50 Percent
1 6.67	1 13.33
3 26.67	2 26.67
4 53.33	3 33.33
5 13.33	4 13.33
	5 13.33

*****I wanted to completely master the materials presented in the course

Mann-Whitney Test and CI: Mastercourse, Mastercourse_W

Masterco N = 15 Median = 4.000
Masterco N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is 2.000
95.4 Percent CI for ETA1-ETA2 is (1.000,3.000)
W = 305.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0026
The test is significant at 0.0016 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL51

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
TOTAL51	15	12	78.0 0.003 1.500

Tally for Discrete Variables: 51P, 51

51P	Percent	51	Percent
2	6.67	1	26.67
3	13.33	2	33.33
4	53.33	3	6.67
5	26.67	4	33.33

*****I wanted to do well in my course to show my ability to friends and my family

Mann-Whitney Test and CI: Showability, Showability_W

Showabil N = 15 Median = 5.000
Showabil N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (0.000,2.000)
W = 284.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0327
The test is significant at 0.0254 (adjusted for ties)

Wilcoxon Signed Rank Test: TOTAL52

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
TOTAL52	15	13	80.5 0.016 1.000

Tally for Discrete Variables: 52P, 52

52P	Percent	52	Percent
3	20.00	1	6.67
4	26.67	2	13.33
5	53.33	3	33.33
		4	26.67
		5	20.00

In studying I prefer course material that really challenges me so I can learn new things

Mann-Whitney Test and CI: Challenge, Challenge_W

Challeng N = 15 Median = 4.000
Challeng N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,2.000)
W = 271.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1103
The test is significant at 0.0973 (adjusted for ties)

Cannot reject at alpha = 0.05

(Very close) My goal in completing this course was to get the job I really wanted

Mann-Whitney Test and CI: Goaljob, Goaljob_W

Goaljob N = 15 Median = 4.000
Goaljob_ N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is 1.000

95.4 Percent CI for ETA1-ETA2 is (-0.000,2.001)
W = 277.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0680
The test is significant at 0.0604 (adjusted for ties)
Cannot reject at alpha = 0.05

Appendix II: ACS Minitab data

1) Mann-Whitney Test and CI: 1, 1P

1 N = 15 Median = 1.000
1P N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 176.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0202
The test is significant at 0.0161 (adjusted for ties)

Wilcoxon Signed Rank Test: 1D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
		Statistic	Median
1D	15	11	6.0
			0.018
			-1.000

Tally for Discrete Variables: 1, 1P

1	Percent	1P	Percent
1	60.00	1	13.33
2	13.33	2	26.67
3	13.33	3	26.67
4	13.33	4	20.00
		5	13.33

2) Mann-Whitney Test and CI: 2, 2P

2 N = 15 Median = 2.000
2P N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 217.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5476
The test is significant at 0.5334 (adjusted for ties)

Cannot reject at alpha = 0.05

3) Mann-Whitney Test and CI: 3, 3P

3 N = 15 Median = 3.000
3P N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-2.001,1.000)
W = 216.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5203
The test is significant at 0.5105 (adjusted for ties)

Cannot reject at alpha = 0.05

4) Mann-Whitney Test and CI: 4, 4P

4 N = 15 Median = 2.000
4P N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)

W = 181.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0344
 The test is significant at 0.0251 (adjusted for ties)

Wilcoxon Signed Rank Test: 4D

Test of median = 0.000000 versus median not = 0.000000

	N	for	Wilcoxon	Estimated	
	N	Test	Statistic	P	
				Median	
4D	15	10	7.0	0.041	-1.000

Tally for Discrete Variables: 4, 4P

4	Percent	4P	Percent
1	40.00	1	13.33
2	46.67	2	40.00
3	13.33	3	26.67
		4	13.33
		5	6.67

5) Mann-Whitney Test and CI: 5, 5P

5 N = 15 Median = 2.000
 5P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -0.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
 W = 236.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8846
 The test is significant at 0.8773 (adjusted for ties)

Cannot reject at alpha = 0.05

6) Mann-Whitney Test and CI: 6, 6P

6 N = 15 Median = 1.000
 6P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-1.999,0.000)
 W = 177.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0225
 The test is significant at 0.0097 (adjusted for ties)

Wilcoxon Signed Rank Test: 6D

Test of median = 0.000000 versus median not = 0.000000

	N	for	Wilcoxon	Estimated	
	N	Test	Statistic	P	
				Median	
6D	15	9	1.5	0.015	-1.000

Tally for Discrete Variables: 6, 6P

6	Percent	6P	Percent
1	80.00	1	40.00
2	20.00	2	13.33
		3	20.00
		4	13.33
		5	13.33

7) Mann-Whitney Test and CI: 7, 7P

7 N = 15 Median = 2.000
 7P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,-0.001)
 W = 195.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1300
 The test is significant at 0.1061 (adjusted for ties)

Cannot reject at alpha = 0.05

8) Mann-Whitney Test and CI: 8, 8P

8 N = 15 Median = 2.000
 8P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
 W = 171.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0114
 The test is significant at 0.0062 (adjusted for ties)

Wilcoxon Signed Rank Test: 8D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
8D	15	11	3.5 0.010 -1.000

Tally for Discrete Variables: 8, 8P

8 Percent	8P Percent
1 20.00	2 40.00
2 60.00	3 26.67
3 20.00	4 33.33

9) Mann-Whitney Test and CI: 9, 9P

9 N = 15 Median = 2.000
 9P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
 W = 174.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0171
 The test is significant at 0.0112 (adjusted for ties)

Wilcoxon Signed Rank Test: 9D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
9D	15	13	16.5 0.046 -1.000

Tally for Discrete Variables: 9, 9P

9 Percent	9P Percent
1 6.67	1 6.67
2 73.33	2 20.00
3 13.33	3 26.67
5 6.67	4 40.00
	5 6.67

10) Mann-Whitney Test and CI: 10, 10P

10 N = 15 Median = 3.000
10P N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 194.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1150
The test is significant at 0.1030 (adjusted for ties)

Cannot reject at alpha = 0.05

11) Mann-Whitney Test and CI: 11, 11P

11 N = 15 Median = 2.000
11P N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (0.000,1.000)
W = 237.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8682
The test is significant at 0.8499 (adjusted for ties)

Cannot reject at alpha = 0.05

12) Mann-Whitney Test and CI: 12, 12P

12 N = 15 Median = 2.000
12P N = 15 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.000)
W = 202.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2211
The test is significant at 0.1630 (adjusted for ties)

Cannot reject at alpha = 0.05

13) Mann-Whitney Test and CI: 13, 13P

13 N = 15 Median = 2.000
13P N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 183.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0443
The test is significant at 0.0343 (adjusted for ties)

Wilcoxon Signed Rank Test: 13D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	P	Median	
	Statistic				
13D	15	11	4.0	0.011	-1.000

Tally for Discrete Variables: 13, 13P

13 Percent	13P Percent
1 13.33	2 33.33
2 46.67	3 26.67
3 33.33	4 26.67
4 6.67	5 13.33

14) Mann-Whitney Test and CI: 14, 14P

14 N = 15 Median = 2.000
 14P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
 W = 174.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0161
 The test is significant at 0.0122 (adjusted for ties)

Wilcoxon Signed Rank Test: 14D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test Statistic	P Median
14D	15	12	11.0 0.031 -1.000

Tally for Discrete Variables: 14, 14P

14 Percent	14P Percent
1 26.67	2 26.67
2 33.33	3 33.33
3 33.33	4 33.33
4 6.67	5 6.67

15) Mann-Whitney Test and CI: 15, 15P

15 N = 15 Median = 2.000
 15P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is 0.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,-0.000)
 W = 208.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3297
 The test is significant at 0.2776 (adjusted for ties)

Cannot reject at alpha = 0.05

16) Mann-Whitney Test and CI: 16, 16P

16 N = 15 Median = 2.000
 16P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,-0.000)
 W = 198.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1647
 The test is significant at 0.1384 (adjusted for ties)

Cannot reject at alpha = 0.05

17) Mann-Whitney Test and CI: 17, 17P

17 N = 15 Median = 2.000
 17P N = 15 Median = 4.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
 W = 179.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0279
 The test is significant at 0.0234 (adjusted for ties)

Wilcoxon Signed Rank Test: 17D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
	Statistic	Median	
17D	15	14	22.5
			0.064
			-1.000

Tally for Discrete Variables: 17, 17P

17	Percent	17P	Percent
1	26.67	1	13.33
2	40.00	2	6.67
3	20.00	3	26.67
4	6.67	4	46.67
5	6.67	5	6.67

18) Mann-Whitney Test and CI: 18, 18P

18 N = 15 Median = 1.000
 18P N = 15 Median = 1.000
 Point estimate for ETA1-ETA2 is 0.000
 95.4 Percent CI for ETA1-ETA2 is (-1.000,-0.000)
 W = 230.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.9504
 The test is significant at 0.9382 (adjusted for ties)

Cannot reject at alpha = 0.05

19) Mann-Whitney Test and CI: 19, 19P

19 N = 15 Median = 1.000
 19P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
 W = 163.0
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0042
 The test is significant at 0.0019 (adjusted for ties)

Wilcoxon Signed Rank Test: 19D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
	Statistic	Median	
19D	15	13	8.0
			0.010
			-1.000

Tally for Discrete Variables: 19, 19P

19	Percent	19P	Percent
1	60.00	1	13.33
2	33.33	2	40.00
3	6.67	3	13.33
		4	26.67
		5	6.67

20) Mann-Whitney Test and CI: 20, 20P

20 N = 15 Median = 1.000
 20P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,-1.000)
 W = 146.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0004
 The test is significant at 0.0002 (adjusted for ties)

Wilcoxon Signed Rank Test: 20D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	Statistic	P	Median
20D	15	11	0.0	0.004	-1.500

Tally for Discrete Variables: 20, 20P

20 Percent	20P Percent
1 53.33	2 40.00
2 40.00	3 33.33
3 6.67	4 13.33
	5 13.33

21) Mann-Whitney Test and CI: 21, 21P

21 N = 15 Median = 2.000
21P N = 15 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
W = 185.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0538
The test is significant at 0.0456 (adjusted for ties)

Wilcoxon Signed Rank Test: 21D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	Statistic	P	Median
21D	15	11	9.0	0.037	-1.000

Tally for Discrete Variables: 21, 21P

21 Percent	21P Percent
1 40.00	1 6.67
2 20.00	2 20.00
3 13.33	3 33.33
4 26.67	4 20.00
	5 20.00

22) Mann-Whitney Test and CI: 22, 22P

22 N = 15 Median = 2.000
22P N = 15 Median = 4.000
Point estimate for ETA1-ETA2 is -2.000
95.4 Percent CI for ETA1-ETA2 is (-2.999,-0.000)
W = 163.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0045
The test is significant at 0.0030 (adjusted for ties)

Wilcoxon Signed Rank Test: 22D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated		
	N	Test	Statistic	P	Median
22D	15	11	0.0	0.004	-1.500

Tally for Discrete Variables: 22, 22P

22	Percent	22P	Percent
1	40.00	2	33.33
2	40.00	3	6.67
4	13.33	4	26.67
5	6.67	5	33.33

23) Mann-Whitney Test and CI: 23, 23P

23 N = 15 Median = 2.000
 23P N = 15 Median = 3.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
 W = 175.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0191
 The test is significant at 0.0133 (adjusted for ties)

Wilcoxon Signed Rank Test: 23D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
		Statistic	Median
23D	15	9	2.5
			0.021
			-1.000

Tally for Discrete Variables: 23, 23P

23	Percent	23P	Percent
1	20.00	1	6.67
2	53.33	2	26.67
3	26.67	3	33.33
		4	13.33
		5	20.00

24) Mann-Whitney Test and CI: 24, 24P

24 N = 15 Median = 1.000
 24P N = 15 Median = 2.000
 Point estimate for ETA1-ETA2 is -1.000
 95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
 W = 173.5
 Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0152
 The test is significant at 0.0046 (adjusted for ties)

Wilcoxon Signed Rank Test: 24D

Test of median = 0.000000 versus median not = 0.000000

	N for	Wilcoxon	Estimated
	N	Test	P
		Statistic	Median
24D	15	9	0.0
			0.009
			-1.000

Tally for Discrete Variables: 24, 24P

24	Percent	24P	Percent
1	73.33	1	33.33
2	26.67	2	20.00
		3	20.00
		4	20.00
		5	6.67

Appendix III: Utrecht Homesickness Scale Minitab Analysis
Mann-Whitney Test and CI: 1, 1W

1 N = 12 Median = 2.000
1W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.000)
W = 130.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2727
The test is significant at 0.2289 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 2, 2W

2 N = 12 Median = 0.000
2W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,0.000)
W = 130.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2727
The test is significant at 0.1481 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 3, 3W

3 N = 12 Median = 1.000
3W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-1.999,-0.000)
W = 121.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0999
The test is significant at 0.0833 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 4, 4W

4 N = 12 Median = 1.000
4W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
W = 122.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1190
The test is significant at 0.0994 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 5, 5W

5 N = 12 Median = 1.000
5W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.001)
W = 130.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2602
The test is significant at 0.2396 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 6, 6W

6 N = 12 Median = 0.500
6W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
W = 136.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4357
The test is significant at 0.3994 (adjusted for ties)

Cannot reject at alpha = 0.05

*******Mann-Whitney Test and CI: 7, 7W**

7 N = 12 Median = 0.000
7W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.001)
W = 113.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0351
The test is significant at 0.0254 (adjusted for ties)

Wilcoxon Signed Rank Test: 7D

Test of median = 0.000000 versus median not = 0.000000

	N	N for	Wilcoxon	Estimated
	N Missing	Test	Statistic	P Median
7D	12	3	8	2.0 0.030 -1.000

Mann-Whitney Test and CI: 8, 8W

8 N = 12 Median = 2.000
8W N = 12 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.001,0.000)
W = 123.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1333
The test is significant at 0.1180 (adjusted for ties)

Cannot reject at alpha = 0.05

*******Mann-Whitney Test and CI: 9, 9W**

9 N = 12 Median = 0.500
9W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 114.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0433
The test is significant at 0.0300 (adjusted for ties)

Wilcoxon Signed Rank Test: 9D

Test of median = 0.000000 versus median not = 0.000000

	N	N for	Wilcoxon	Estimated
	N Missing	Test	Statistic	P Median
9D	12	3	8	3.0 0.042 -1.000

*******Mann-Whitney Test and CI: 10, 10W**

10 N = 12 Median = 0.000
10W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.001,-0.000)
W = 114.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0433
The test is significant at 0.0260 (adjusted for ties)

Wilcoxon Signed Rank Test: 10D

Test of median = 0.000000 versus median not = 0.000000

	N	N for	Wilcoxon	Estimated
	N Missing	Test	Statistic	P Median
10D	12	3	9 6.0	0.058 -1.000

Mann-Whitney Test and CI: 11, 11W

11 N = 12 Median = 1.000
11W N = 12 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-3.000,-0.001)
W = 125.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1659
The test is significant at 0.1485 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 12, 12W

12 N = 12 Median = 0.000
12W N = 12 Median = 0.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.999,-0.000)
W = 131.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2987
The test is significant at 0.2295 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 13, 13W

13 N = 12 Median = 1.000
13W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 151.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.9770
The test is significant at 0.9757 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 14, 14W

14 N = 12 Median = 1.000
14W N = 12 Median = 2.500
Point estimate for ETA1-ETA2 is -1.000

95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 131.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2987
The test is significant at 0.2822 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 15, 15W

15 N = 12 Median = 1.000
15W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 149.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 1.0000
The test is significant at 1.0000 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 16, 16W

16 N = 12 Median = 1.000
16W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 142.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.6861
The test is significant at 0.6615 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 17, 17W

17 N = 12 Median = 1.000
17W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,1.000)
W = 133.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3556
The test is significant at 0.3267 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 18, 18W

18 N = 12 Median = 0.000
18W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,-0.000)
W = 149.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.9770
The test is significant at 0.9712 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 19, 19W

19 N = 12 Median = 1.000
19W N = 12 Median = 0.500

Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 157.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.7075
The test is significant at 0.6863 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 20, 20W

20 N = 12 Median = 1.000
20W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-0.001,1.000)
W = 166.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3708
The test is significant at 0.3341 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 21, 21W

21 N = 12 Median = 1.000
21W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 154.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8399
The test is significant at 0.8312 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 22, 22W

22 N = 12 Median = 1.000
22W N = 12 Median = 0.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 157.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.6861
The test is significant at 0.6636 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 23, 23W

23 N = 12 Median = 1.500
23W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 156.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.7290
The test is significant at 0.7153 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 24, 24W

24 N = 12 Median = 1.500

24W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.001)
W = 163.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4705
The test is significant at 0.4527 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 25, 25W

25 N = 12 Median = 1.000
25W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-0.999,1.000)
W = 162.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5067
The test is significant at 0.4881 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 26, 26W

26 N = 12 Median = 1.500
26W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 154.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8174
The test is significant at 0.8101 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 27, 27W

27 N = 12 Median = 0.500
27W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (0.000,1.001)
W = 161.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5444
The test is significant at 0.4841 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 28, 28W

28 N = 12 Median = 0.000
28W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.001)
W = 135.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.4025
The test is significant at 0.3540 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 29, 29W

29 N = 12 Median = 0.500
29W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-0.001,1.001)
W = 159.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.6236
The test is significant at 0.5704 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 30, 30W

30 N = 12 Median = 0.000
30W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 128.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2145
The test is significant at 0.1686 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 31, 31W

31 N = 12 Median = 0.000
31W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.999,-0.000)
W = 131.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2987
The test is significant at 0.2499 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 32, 32W

32 N = 12 Median = 0.000
32W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 126.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1842
The test is significant at 0.1558 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 33, 33W

33 N = 12 Median = 0.500
33W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 151.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.9770
The test is significant at 0.9740 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 34, 34W

34 N = 12 Median = 0.500
34W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.001)
W = 119.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0783
The test is significant at 0.0609 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 35, 35W

35 N = 12 Median = 0.500
35W N = 12 Median = 1.500
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 121.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1060
The test is significant at 0.0882 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 36, 36W

36 N = 12 Median = 1.500
36W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.999,1.000)
W = 146.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8625
The test is significant at 0.8541 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 37, 37W

37 N = 12 Median = 1.000
37W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,1.000)
W = 138.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5067
The test is significant at 0.4893 (adjusted for ties)

Cannot reject at alpha = 0.05

*******Mann-Whitney Test and CI: 38, 38W**

38 N = 12 Median = 0.000
38W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-2.000,-0.000)
W = 117.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0647
The test is significant at 0.0493 (adjusted for ties)

Mann-Whitney Test and CI: 39, 39W

39 N = 12 Median = 2.000
39W N = 12 Median = 3.000
Point estimate for ETA1-ETA2 is -1.000
95.4 Percent CI for ETA1-ETA2 is (-3.000,-0.001)
W = 117.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0606
The test is significant at 0.0531 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 40, 40W

40 N = 12 Median = 1.500
40W N = 12 Median = 0.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.001,2.000)
W = 159.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.6033
The test is significant at 0.5749 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 41, 41W

41 N = 12 Median = 1.000
41W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 161.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.5444
The test is significant at 0.5243 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 42, 42W

42 N = 12 Median = 0.000
42W N = 12 Median = 0.500
Point estimate for ETA1-ETA2 is 0.000
95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)
W = 145.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.7950
The test is significant at 0.7699 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 43, 43W

43 N = 12 Median = 0.500
43W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (0.001,2.000)
W = 178.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.1124
The test is significant at 0.0569 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 44, 44W

44 N = 12 Median = 0.500
44W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
W = 165.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.3865
The test is significant at 0.3166 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 45, 45W

45 N = 12 Median = 1.000
45W N = 12 Median = 0.000
Point estimate for ETA1-ETA2 is -0.000
95.4 Percent CI for ETA1-ETA2 is (0.000,2.001)
W = 171.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2253
The test is significant at 0.1607 (adjusted for ties)

Cannot reject at alpha = 0.05

Mann-Whitney Test and CI: 46, 46W

46 N = 12 Median = 0.000
46W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is -0.500
95.4 Percent CI for ETA1-ETA2 is (-2.000,0.000)
W = 127.5
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.2040
The test is significant at 0.1602 (adjusted for ties)

Cannot reject at alpha = 0.05

******* SPECIAL MENTION Mann-Whitney Test and CI: 47, 47W**

47 N = 12 Median = 2.000
47W N = 12 Median = 1.000
Point estimate for ETA1-ETA2 is 1.000
95.4 Percent CI for ETA1-ETA2 is (-0.000,1.000)
W = 180.0
Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0885
The test is significant at 0.0699 (adjusted for ties)

Cannot reject at alpha = 0.05

Wilcoxon Signed Rank Test: 47D

Test of median = 0.000000 versus median not = 0.000000

	N	N for	Wilcoxon	Estimated		
	Missing	Test	Statistic	P	Median	
47D	12	3	8	29.0	0.141	0.5000

Mann-Whitney Test and CI: 48, 48W

48 N = 12 Median = 2.000
48W N = 12 Median = 2.000
Point estimate for ETA1-ETA2 is -0.000

95.4 Percent CI for ETA1-ETA2 is (-1.000,1.000)

W = 146.5

Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.8625

The test is significant at 0.8563 (adjusted for ties)

Cannot reject at alpha = 0.05

Descriptive Statistics: 46, 47, 48

Variable	N	N*	Mean	Median	TrMean	StDev
46	24	6	0.917	0.500	0.818	1.176
47	24	6	1.292	1.000	1.273	0.859
48	24	6	2.125	2.000	2.136	1.116

Variable	SE Mean	Minimum	Maximum	Q1	Q3
46	0.240	0.000	4.000	0.000	1.750
47	0.175	0.000	3.000	1.000	2.000
48	0.228	0.000	4.000	1.000	3.000