The Characteristics of Apathy in University Students and Issues in Education
The Effect on Clinical Training of Attitude and Results (GPA) Prior to Clinical Training, and Forecast Training Results

Taro Okamura

Teruko Iwasaki, Makoto Kawata, Akiko Takeshita, Yoko Kawada, Yuko Sone

Department of Occupational Therapy, Faculty of Medical Technology, Niigata University of Health and Welfare

Summary

Background: In recent years, the apathetic attitude of students has been a frequent problem in clinical training.

Objectives: To consider the effects on students' results for the clinical training element of their course of their attitude and grade point average (GPA) prior to clinical training, and to examine educational issues within the university.

Method: The study focused on 43 fourth-year students in this university's Department of Occupational Therapy. In order to survey students' attitudes and results prior to undertaking clinical training, we looked at three criteria: their GPA at the university prior to clinical training, an "Apathy scale" and a "locus of control". Thereafter, using Spearman rank order correlations and multiple logistic regression analysis, we undertook a comparison, at a significance level of 5%, of the relationship between attitude and results prior to the two eight-week periods of clinical training (Clinical Training III) undertaken by the students.

Results: With regard to the training results in the field of mental disability, there was a significant correlation between GPA and Apathy. In particular, those with a sense of physical fatigue and those suffering from a disrupted lifestyle tended to have bad results for their training in this field. In the field of geriatric care as well, there was a significant correlation where those with a disrupted lifestyle were concerned. On the other hand, unlike in other fields, results for training in the field of physical disability showed a significant correlation with regard to lack of effort.

Looking at the training by period, GPA had an effect on results for the first period of training, but no correlation was seen with regard to results for the second period. On the other hand, the locus of control and Apathy total were related to results for the second period of training.

Multiple logistic regression analysis showed us that it was possible to predict the probability that results for training in the field of mental disability would be in the lower two groups from the rise in the total for lifestyle disruption prior to clinical training (odds ratio 2.40; 95% confidence interval, 1.03 ~ 5.57, p=0.04). Furthermore, we discovered that it was possibly to predict the probability that results for training in the field of mental disability would be in the top group from the rise in the total for physical fatigue prior to clinical training (odds ratio 0.62; 95% confidence interval, 0.40 ~ 0.95, p=0.03).

Conclusions: Items where there was a correlation with clinical training results can generally be said to be expressions of attitude or drive. In other words, even if the low expression of attitude or drive can be covered up in the first period of training by academic work completed prior to the training, it is likely that a apathetic attitude will have an effect on results for clinical training during the second period.

The point on which we would particularly like to focus is the fact that, based on the results of multiple logistic regression analysis, we were able

to calculate that it was possible to predict results for training in the field of mental disability from the totals for lifestyle disruption and physical fatigue prior to clinical training.

Background

With regard to the problems of modern student nurses, Shigeru Sakuraba states that there has been a decline in students' social and academic ability, and that they are inclined to be self-centred and closed, asserting that, "There is a tendency to believe that they are invulnerable and to fail to show an interest in anything other than what they have experienced over the twenty years of their lives"[1]. Similar patterns can be seen with regard to the problem of occupational therapy students[2,3]. In clinical training, they cannot meet deadlines for the submission of reports, neglect their duty to provide oral reports, and act without obtaining the permission of their supervisor, even though they know that such permission is required. One sees a phenomenon in which they avoid carrying something out, even though they are capable of dealing with it, and just waste time [2,3].

We came to believe that there might be a link between these problems and the effect on clinical training of attitude and results prior to clinical training. If attitude and results representing the learning status prior to clinical training affect this training in the form of the Apathy phenomenon, it will be necessary to consider measures to deal with it as an educational problem, rather than merely treating it as a problem related to individual characteristics and personality[2,3].

Objectives

This study focused on the attitudes and academic results prior to clinical training of students in this university's Department of Occupational Therapy. It examined the relationship between the outcomes of a survey prior to clinical training and the results the students obtained for the clinical training element of their course. From this, we gave further consideration to the question of what the educational issues prior to clinical training were and looked at whether it was possible to predict the results obtained in clinical training from the various surveys conducted prior to this training.

Method

1. Targets

The targets of this study were 43 fourth-year students (9 male, 34 female, average age 21.5 years) in the Department of Occupational Therapy who, following an explanation of the study, had agreed in writing to grant their cooperation. With regard to the procedure, we carried out baseline surveys of the "Apathy scale"[9] (please refer to the appendix table), which measured 50 items in 7 areas for each student one month before clinical training, and the locus of control (LOC)[10]. Furthermore, we carried out a survey of each student's grade point average (GPA) up to the second semester of their third year. Subsequently, the students completed two eight-week periods of clinical training. With regard to the selection of the fields on which they would focus during this training, the field of physical disability was mandatory, while the second field was selected from the fields of mental disability, developmental disability and geriatric care, with priority being given to students' requests. Students' performance was evaluated by each supervisor in each field, on the basis of a four-level scale (A=3, B=2, C=1, D=0). This was their result for their clinical training.

2. Statistical Processing

1) Using Spearman rank order correlations for the surveys conducted before training (baseline surveys) and the results of the

second period of clinical training, we undertook a comparison at a significance level of 5%.

2) Using multiple logistic regression analysis, we considered whether it was possible to predict results for the clinical training from the outcomes of the pre-training surveys. We analysed the relationship, taking the top group of the four-level scale of clinical results assigned by supervisors in each field as the objective variable and the various baseline surveys as explanatory variables. Furthermore, using the same method, we compared the lower two groups of the four-level scale of clinical results assigned by supervisors in each field with the various baseline surveys. We corrected the multiple logistic regression analysis for sex and age.

Results

Table 1

Characteristics of Targets: Baseline

	Average	S.D.	N
Female/Male			34/4
Age	21.53	2.02	43
3rd year 2nd semester GPA	3.23	0.39	43
Locus of Control	49.33	6.75	43
Apathy Scale Total	89.93	11.47	43
F1: Interpersonal Apathy	18.79	4.55	43
F2: Clarity of Future Direction	11.09	2.33	43
F3: Lack of Effort	12.00	3.25	43
F4: Physical Fatigue	17.86	3.80	43
F5: Feeling of Efficacy	11.84	2.33	43
F6: Lifestyle Disruption	9.12	2.72	43
F7: Active Willingness to Learn	9.23	1.72	43

Table 2

Results of Training in Each Field

	Average	S.D.	N
1st Period Results	3.12	0.79	43
2nd Period Results	3.00	0.76	43
Physical Disability Training	2.95	0.75	43
Mental Disability Training	3.21	0.77	29
Geriatric Care Training	3.15	0.80	13

Table 1 shows the characteristics of the targets before clinical training as the baseline. In addition, results for training in each field are shown in Table 2. The correlation between

results for training in each field, the Apathy scale and locus of control items is shown in Table 3. The outcomes of the correlation between results for each training period and academic results, feelings of Apathy and locus of control (LOC) items are shown in Table 4. With regard to the results of the multiple logistic regression analysis, only those items recognised as having a significant relationship are shown in Tables 5 and 6.

Table 3

Results of Training in Each Field, Apathy Scale & Locus of Control

Item	Correlation Coefficient	P		N
Relationship Between Results in Each Training Field & Academic Results				
Physical disability training results & GPA	0.22	0.15		43
Mental disability training results & GPA	0.44	0.02	*	29
Geriatric care training results & GPA	0.21	0.48		13
Relationship Between Results in Each Training Field & Apathy				
Physical disability training results & Apathy scale total	-0.26	0.09		43
Physical disability training results & F1: Interpersonal Apathy	0.00	0.99		43
Physical disability training results & F2: Clarity of Future Direction	-0.13	0.41		43
Physical disability training results & F3: Lack of Effort	-0.31	0.05	*	43
Physical disability training results & F4: Physical Fatigue	-0.16	0.31		43
Physical disability training results & F5: Feeling of Efficacy	-0.02	0.90		43
Physical disability training results & F6: Lifestyle Disruption	-0.24	0.12		43
Physical disability training results & F7: Active Willingness to Learn	0.04	0.81		43
Mental disability training results & Apathy scale total	-0.47	0.01	**	29
Mental disability training results & F1: Interpersonal Apathy	0.07	0.73		29
Mental disability training results & F2: Clarity of Future Direction	-0.23	0.22		29
Mental disability training results & F3: Lack of Effort	-0.24	0.21		29
Mental disability training results & F4: Physical Fatigue	-0.49	0.01	**	29
Mental disability training results & F5: Feeling of Efficacy	-0.30	0.11		29
Mental disability training results & F6: Lifestyle Disruption	-0.45	0.01	**	29
Mental disability training results & F7: Active Willingness to Learn	-0.21	0.29		29
Geriatric care training results & Apathy scale total	-0.39	0.19		13
Geriatric care training results & F1: Interpersonal Apathy	-0.32	0.29		13
Geriatric care training results & F2: Clarity of Future Direction	-0.45	0.12		13
Geriatric care training results & F3: Lack of Effort	0.27	0.37		13
Geriatric care training results & F4: Physical Fatigue	-0.02	0.96		13
Geriatric care training results & F5: Feeling of Efficacy	-0.44	0.13		13
Geriatric care training results & F6: Lifestyle Disruption	-0.59	0.04	*	13
Geriatric care training results & F7: Active Willingness to Learn	0.27	0.38		13
Relationship Between Results in Each Training Field & Locus of Control				
Physical disability training results & Locus of Control	0.01	0.95		43
Mental disability training results & Locus of Control	-0.05	0.81		29
Geriatric care training results & Locus of Control	0.36	0.23		13

Table 4
Relationship Between Results in Each Training Period, Academic Results,
Apathy & Locus of Control

Item	Correlation Coefficient	P		N
Relationship Between Results in Each Period & Academic Results				
1st period results & GPA	0.41	0.01	*	43
2nd period results & GPA	0.06	0.73		43
Relationship Between Results in Each Period & Apathy				
1st period results & Apathy scale total	-0.19	0.23		43
1st period results & F1: Interpersonal Apathy	0.00	0.96		43
1st period results & F2: Clarity of Future Direction	-0.23	0.13		43
1st period results & F3: Lack of Effort	-0.01	0.96		43
1st period results & F4: Physical Fatigue	-0.16	0.31		43
1st period results & F5: Feeling of Efficacy	-0.03	0.86		43
1st period results & F6: Lifestyle Disruption	-0.24	0.12		43
1st period results & F7: Active Willingness to Learn	0.11	0.47		43
2nd period results & Apathy scale total	-0.44	0.00	**	43
2nd period results & F1: Interpersonal Apathy	-0.02	0.88		43
2nd period results & F2: Clarity of Future Direction	-0.10	0.52		43
2nd period results & F3: Lack of Effort	-0.37	0.02	*	43
2nd period results & F4: Physical Fatigue	-0.32	0.04	*	43
2nd period results & F5: Feeling of Efficacy	-0.31	0.04	*	43
2nd period results & F6: Lifestyle Disruption	-0.52	0.00	**	43
2nd period results & F7: Active Willingness to Learn	-0.19	0.24		43
Relationship Between Results in Each Period & Locus of Control				
1st period results & Locus of Control	-0.18	0.26		43
2nd period results & Locus of Control	0.33	0.03	*	43

Table 5
Comparison of Totals for F6: Lifestyle Disruption
and the Lower Two Groups of Results for Training
in the Field of Mental Disability

	Odds Ratio	C.I. 95.0%	p
Total for F6: Lifestyle Disruption	2.40	(1.03 – 5.57)	0.04

Corrected for sex and age
Odds ratio: Probability that the result will be in the bottom two groups for each point that the F6 total rises
CI: confidence interval

Table 6
Comparison of Totals for F4: Physical Fatigue and
the Top Group Of Results for Training in the Field of
Mental Disability

	Odds Ratio	C.I. 95.0%	p
Total for F4: Physical Fatigue	0.62	(0.40 – 0.95)	0.03

Corrected for sex and age
Odds ratio: Probability that the result will be in the bottom two groups for each point that the F4 total rises
CI: confidence interval

<Materials>
An Operational Definition of the Apathy Scale (Reference)
F1: Interpersonal Apathy
  8. Dealing with other people is a pain in the neck.
  14. There's nobody with whom I can talk about my problems.
  4. I get tired when I'm with other people.
  44. There's someone whom I can consult when I have a problem.
  29. I prefer being on my own.
  13. I always feel cheerful.
  38. I only talk about trivial things with my classmates.
  47. I don't like being told what to do by others, even if they're worried about me.
  18. Even if I'm angry, I've no inclination to have an argument.
F2: Clarity of Future Direction
  10. I've decided what work I want to do.
  46. I have a clear idea of what I want to do in the future.
  3. I am deciding what career path to take after graduation.
  50. I have a general idea about what kind of life I'd like in the future.
  19. I am striving to achieve my goals.
F3: Lack of Effort
  45. I believe that I can't change anything no matter how hard I try, so whatever I do is pointless.
  22. No matter how hard I try, most things are pointless.
  17. Life is determined by one's fate, so I can't change anything myself.
  40. Even if I try a little, I get nowhere.
  31. If one makes an effort, one will achieve something. (reverse item)
  1. I can't follow the lessons at university.
F4: Physical Fatigue
  36. I become listless easily.
  16. My eyes become tired easily.
  43. I often become tired and don't want to do anything.
  48. I often feel that various things are just too much trouble.
  6. I often have a headache.
  34. I often don't want to go to university when I wake up in the morning.
  26. I yawn frequently.

F5: Feeling of Efficacy
  25. I am good at something. (reverse item)
  39. Outside of academic work, I have something I tend to ask people to leave up to me.
  42. When planning something, I prefer to go along with what others have decided, rather than thinking for myself.
  49. Once I have started something, I tend to carry it through until the end. (reverse item)
  33. I don't like taking on positions of responsibility, such as being on a committee.
F6: Lifestyle Disruption
  20. I often fall asleep during classes because I'm tired.
  30. I often stay up late for no reason.
  32. I do not often study willingly.
  5. I often forget to write reports and complete assignments.
F7: Active Willingness to Learn
  12. I want to achieve better grades.
  2. I make an effort to take proper notes in class.
  15. I study when I am told that there is an exam.
  37. I don't really care, even if I get a poor mark in an exam.

1. There is a correlation between results for clinical training in the field of mental disability and grade point average (GPA) before clinical training (rs=0.44, p=0.02) (Table 3).

2. There is a negative correlation between results for training in each field and the state of Apathy prior to clinical training (Table 3).

  1) There are significant negative correlations between results for clinical training in the field of mental disability and pre-training F4: physical fatigue (rs=-0.49, p=0.01) and F6: lifestyle disruption (rs=-0.45, p=0.01).

  2) There is a significant negative correlation between results for clinical training in the field of geriatric care and pre-training F6: lifestyle disruption (rs=-0.59, p=0.04).

  3) There is a significant negative correlation between results for clinical training in the field of physical disability and pre-training F3: lack of effort (rs=-0.31, p=0.05).

3. There is a significant correlation between clinical training results during the first period and grade point average (GPA) before clinical training (rs=0.41, p=0.01) (Table 4).

4. There is a significant negative correlation between clinical training results during the second period and the state of Apathy prior to clinical training (Table 4).

  1) There are significant negative correlations between clinical training results during the second period and pre-training F4: physical fatigue (rs=-0.32, p=0.04), F5: lack of a feeling of efficacy (rs=-0.31,

p=0.04), F6: lifestyle disruption (rs=-0.52, p=0.00) and the Apathy scale total (rs=-0.44, p=0.00).

5. There is a significant correlation between the pre-training locus of control and clinical training results during the second period (rs=0.33, p=0.03) (Table 4).

6. For every point that pre-training F6: lifestyle disruption rose, the odds ratio that results for clinical training in the field of mental disability would be in the lower two groups of the four-level scale was 2.40 (95% confidence interval, 1.03 ~ 5.57, p=0.04) (Table 5).

7. For every point that pre-training F4: physical fatigue rose, the odds ratio that results for clinical training in the field of mental disability would be in the top group was 0.62 (95% confidence interval, 0.40 ~ 0.95, p=0.03) (Table 6).

Discussion

In clinical training in the field of mental disability, the study suggested that there is a tendency for students' grade point average (GPA) and Apathy prior to clinical training to be related to the results that they attained in the clinical training element of the course. In particular, students who reported F4: physical fatigue and F6: lifestyle disruption achieved poor results in clinical training in the field of mental disability. In the field of geriatric care as well, there was a correlation with lifestyle disruption. At the same time, unlike in other fields, lack of effort had a correlation with results for training in the field of physical disability.

When we looked at the results for each period of training, we could see that GPA was linked to results during the first period of training, but could see no correlation between GPA and results during the second period of training; rather, locus of control and the Apathy scale were connected with the results for the latter period.

Items that showed a correlation with results for clinical training are generally described as attitude and approach to training[9,11]. In other words, with regard to a poor attitude and approach to training, it seemed that even if students could get by during the first period of training with what they had learned prior to clinical training, attitude - including Apathy - affected clinical training results during the second period.

What are the Educational Issues Prior to Training?

F3: lack of effort demonstrated a negative correlation with results in the field of physical disability and results for the second period of training. More specifically, the items "45. I believe that I can't change anything no matter how hard I try, so whatever I do is pointless", "22. No matter how hard I try, most things are pointless", "17. Life is determined by one's fate, so I can't change anything myself", "40. Even if I try a little, I get nowhere", "31. If one makes an effort, one will achieve something (reverse item)", and "1. I can't follow the lessons at university"[3,9,12] are the causes of a serious degree of maladjustment to clinical training in the student. In other words, as a learning goal, one could say that it is necessary for students to not only acquire knowledge before training, but also learn about the necessity of effort. In particular, before participating in training in the fields of mental disability and geriatric care, or the second period of training, it is likely to be important for guidance staff at the university to provide students with concrete, individual guidance covering everything from lifestyle to matters relating to learning, with regard to the items connected with F6: lifestyle disruption: "20. I often fall asleep during classes because I'm tired", "30. I often stay up late for no reason", "32. I do not often study willingly", and "5. I often forget to write reports and complete assignments". With regard to "36. I become listless easily", "16. My eyes

become tired easily", "43. I often become tired and don't want to do anything", "48. I often feel that various things are just too much trouble", "6. I often have a headache", "34. I often don' t want to go to university when I wake up in the morning", and "26. I yawn frequently", the items connected with F4: physical fatigue, which had a relationship with training results in the field of mental disability and in the second period of training, we believed that it was important for guidance staff at the university to provide students with concrete, individual guidance relating to lifestyle and maintaining good health. Furthermore, in order to do this, guidance and training based on cognitive behavioural therapy could also be required[13-17].

Is it Possible to Predict the Results of Clinical Training?

The results of multiple logistic regression analysis showed that, in the field of mental disability in particular, a rise in the total for F6: lifestyle disruption prior to training affected results in the lower two groups. This demonstrated that it was possible to predict that, for every point by which the total for lifestyle disruption increased, the probability that the student's results would be in the lower two groups increased by 2.4 times (95% confidence interval, 1.03 ~ 5.57). Moreover, a rise in the total for F4: physical fatigue prior to training had an effect on the top group of training results. This meant that it was possible to predict that, for every point by which the total for physical fatigue increased, the probability that the student's results would be in the top group of training results decreased by 0.62 times (95% confidence interval, 0.40 ~ 0.95).

Conclusion

We discovered that attitude and results prior to clinical training have an effect on clinical training. Currently, the guidance provided by the university prior to clinical training emphasizes the acquisition of skills and knowledge. The results obtained prior to training through this influence the first period of training, so it is important to continue providing students with skills and knowledge. On the other hand, we observed that results for training in the field of mental disability have a correlation with grade point average (GPA) and Apathy prior to training. In particular, students who suffer from physical fatigue and a disrupted lifestyle had poor results for training in the field of mental disability. There was also a correlation with lifestyle disruption in the field of geriatric care. Moreover, unlike in other fields, lack of effort had a significant correlation with results for training in the field of physical disability. When we looked at the results for each period of training, we could see that GPA was linked to results during the first period of training, but could see no correlation between GPA and results during the second period of training; rather, locus of control and the Apathy scale were connected with the results for the latter period.

Consequently, we believe that it is necessary for the teaching staff at the university to grasp and deal with these problems relating to the management of student lifestyles before they begin clinical training, or during their day-to-day activities; moreover, they should provide specific guidance regarding the importance of making an effort and ways in which this can be done.

In addition, the point on which we would particularly like to focus is the fact that, based on the results of multiple logistic regression analysis, we were able to calculate that it was possible to predict results for training in the field of mental disability from the totals for lifestyle disruption and physical fatigue prior to clinical training.

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