

OUTCOMES OF MANDATORY DISABILITY STUDIES ON NURSE AND TEACHER EDUCATION STUDENTS' ATTITUDES TOWARDS PEOPLE WITH DISABILITIES

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Introduction

The philosophy of normalisation (Nirje, 1970; Wolfensberger, 1972) is internationally recognised as the underlying force which challenged communities to question the inequality of life opportunities for people with disabilities. Resultant awareness of issues related to human rights and social justice has led to the community integration of people with disabilities. In Australia, recent social, legislative and policy changes have ensured that community integration and equal opportunity become not only current philosophy, but also enforced practice. However, while legislation can enforce changes to models of service provision and ensure equality of opportunity for people with disabilities, positive attitudes cannot be legislated (Jones & Guskin, 1984; Rioux, 1994). The philosophy of equality and acceptance is not always reflected in practice, with current debate implying that discriminatory social attitudes are the fundamental cause of 'disablement' (Gleeson, 1995), and that societal attitudes toward community integration in Australia remain negative or non-accepting (Gething, 1994).

The historic treatment of people with disabilities in Australia mirrors other parts of the world. However, idiosyncratic features particular to the development of the Australian economic and social system are evident. Related literature suggests there is a strong relationship between the economic and social characteristics of a society and their treatment of people viewed as 'different' or 'deviant' (Goffman, 1968; Ford, 1981; Tully, 1986; Stern, 1993). Societies which experience significant social and economic change may modify their conceptions of 'difference' or 'deviance' although the beliefs of the dominant group

remain influential. This inherent social control influences general community attitudes and quality of service provision to marginalised groups. In an Australian context, society's treatment of people with disabilities is similar to the treatment of other devalued groups such as those with psychiatric disabilities, indigenous Australians and the aged (Bostock, 1991).

One response to this marginalisation has been the formulation of a number of laws at both Federal and State level which aim to give people with disabilities similar rights in terms of lifestyle, work and leisure as any other person in the community.

Examples of this legislation include the Commonwealth Disability Services Act (1986), the Commonwealth-State Agreement (1991), the NSW

Disability Services Act (1993) and the Disability Discrimination Act (1993). Underlying the changes to service provision enforced by these laws are concomitant shifts in attitude. For a true acceptance and implementation of the spirit and intent of this legislation a strong philosophical commitment to the rights of people with disabilities is necessary. In support of this assertion, the Australian Federal Human Rights Commissioner, Brian Burdekin (1991), suggests that there is a lot more involved than just changing the law. However, he stresses that legal change is very often a necessary precondition for changing and educating public attitudes to the point where people with intellectual disabilities and other disabilities have exactly the same rights and indeed additional rights to special protection where that is required (Burdekin, 1991).

One of the most direct influences of both the movement towards community inclusion of people with disabilities and related legislative change, has been a growth in awareness of the need for education of both the general community and professional groups most likely to interact with people with disabilities. This has led to the development of a 'new profession' made up of people who provide educative support to people with a disability in all facets of their life including accommodation, employment and leisure. In NSW, a related development has been the inclusion of mandatory disability study into undergraduate teacher and nurse education courses. While it is not disputed that such an initiative is both timely and necessary, there has been little discourse in the literature related to the development of mandatory units, the outcome of mandatory disability study on student knowledge, skills, attitudes, students' future career and study choices and subsequent practice.

Career and study choices

This paper reports the results of an examination of the relationship between the attitudes of students who have completed mandatory disability study and their subsequent career and post-graduate study choices. These findings form part of a longitudinal study which examined attitude formation and change across the students' three years of tertiary education.

There is limited literature identifying beginning nurse and teacher career and study choices. Morris and Wang (1989) found that the majority of nurse education students choose to work in a general hospital rather than a speciality area. Anecdotal evidence suggests that beginning nurses do not choose this speciality, do not see it as a career option and show little interest in post-graduate study (H. Ang, Personal Communication, June, 1992), even though they complete mandatory disability study as a pre-requisite to registration. A study which investigated the relationship of nurses' career choice, career satisfaction and success found that individual role perception was a critical variable (Beyer, 1992).

A study investigating nurses' motivation for further education reported that major concerns included professional competence, career and salary options (DeSilets, 1995). A recent study of nurses' post-graduate study choices found that the critical factor was finding the most appropriate program (Willis, 1996). It is suggested that this is often difficult for nurses as they are not adequately socialised into the role of a post-graduate student in their undergraduate programs (Hupcey, 1990).

It is acknowledged that career choices for beginning teachers are not as broad as beginning nurses, with most beginning teachers choosing to teach in mainstream schools in the area in which they received their undergraduate training. Accordingly, post-graduate options for teachers have historically focused on generic education, rather than speciality areas. It is suggested that school reform has rarely focused on the development of teacher knowledge (Darling-Hammond et al, 1995).

Empirical evidence of any relationship between attitude, future career and study choice has major implications for employers and for the development of both undergraduate and post-graduate curricula. Yet, the influence of attitude upon future career and study choice has not been a focus of previous studies.

As contact is repeatedly cited as a variable influencing attitude change, the relationship between students' assessment of the mandatory contact component of their course, choice of future career options and post-graduate study is also examined in this empirical study.

Teacher education context

The philosophy of integration of students with disabilities into the mainstream of education has been accepted contemporary practice in Australian systems of education since the mid 1970's. Studies of integration practices suggest that the classroom climate is crucial to the success of integration, with positive teacher attitude the major variable (Hannah & Pliner, 1983; Center & Ward, 1987; Chow, 1991). The necessity for undergraduate teachers to complete mandatory special education units has been widely debated in educational forums since integration became a common practice (Martin, 1991). However, due to time constraints and variable commitments, many Australian universities offer courses in special education at post graduate level, or as a

pre-service elective only (Hickson, 1989). The literature reports that beginning teachers are more accepting of the practice of integration after completion of pre-service special education study (Westwood, 1984; Center & Ward, 1987).

Over the last decade special education interest groups in NSW have continued to lobby for the inclusion of special education at an undergraduate level. This issue was finally addressed in NSW, when it was recommended that newly trained teachers appointed from 1991 onwards complete at least one course in special education, requiring a minimum of two hours contact time per week across one semester. A further development was the introduction in January 1994 of the necessity for new graduates to complete a special education unit equivalent to a thirteen week course. To become eligible for employment, prospective teachers must have evidence of completion of this unit clearly documented on their university transcript.

Nurse education context

The movement of nurse education from the hospital based system to the tertiary sector (1985) brought a concomitant change to the underlying philosophy of educational practice and the system of nurse registration. In 1987 the previous system of multiple registration was amalgamated into one register incorporating mental health (psychiatric), developmental disability (mental retardation) and medical/surgical (general) nursing. The inclusion of developmental disability and mental health nursing as a pre-requisite for beginning practitioners differed to the previous system which had isolated these areas as specialities (i.e. a specialist certificate in Mental Retardation nursing). This change required universities to incorporate substantial theoretical and practical components of disability into their undergraduate nursing courses to satisfy curriculum boards and the NSW Nurses Registration Board (NRB). It is suggested that this shift to a comprehensive model of practice altered the face of nursing, requiring a reconceptualisation of previous practice (Atkins, 1990). Curriculum models of nurse education within universities are variable and range from those which take an integrated or holistic approach where 'disability' study is not distinct from other specialities to those which maintain specific units in developmental disability (Roberts, 1991).

Method

Subjects

The subjects chosen for this study were pre-registration nursing students (N=90) enrolled in a Diploma of Health Science (Nursing) and

pre-service teaching students (N=90) enrolled in a Diploma of Education (Primary) at Australian Catholic University (NSW).

As mentioned previously, both nurse and teacher education students in all NSW Universities are required to complete mandatory study in the disability/special education area as part of their undergraduate degree. Nurse education students complete two semesters of theory and at least two clinical placements in organisations which provide a

service to people with disabilities. These may include both segregated settings such as institutions and hospitals as well as community based services.

Teacher education students complete a one semester unit in special education. This included a compulsory case study assignment requiring students to have ongoing contact with a student with a disability in an integrated school setting. Teaching students are also likely to interact with students with disabilities as part of their general practicum experience.

Subjects were chosen randomly from a total of 260 students (140 nursing, 120 teaching).

Instrumentation

Two previously constructed and validated measures of attitudes toward people with disabilities were employed in this study. The first is the most commonly used international measure of general attitude toward people with disabilities, the Attitudes Toward Disabled Persons Scale, ATDP (Yuker, Block & Young, 1970). The literature has reported that as a single comprehensive measure of attitude is insufficient, a variety of attitudinal measures should be implemented (Siller, 1984; Leyser, Cumblad & Strickman, 1986). A second measure of attitude, The Interaction with Disabled Persons Scale, IDP (Gething, 1991), developed in Australia, was also administered to the sample.

Two measurement tools were developed by the senior author for the purpose of this study, to measure variables thought worthy of closer examination. The first is the Self-Efficacy Toward Future Interactions with People with Disabilities Scale (SEIPD), a measure of self-efficacy toward future interactions with people with disabilities. The second, the Mandatory Contact Scale (MCS), a measure of students' assessment of the contact component of the mandatory disability unit.

The Self-Efficacy Scale, (SEIPD) was developed from the hypothesis that students' perceived self-efficacy regarding professional interactions with people with disabilities constitutes a significant mediating variable influencing resultant attitudes and discomfort in social interaction. In this study, self-efficacy was operationalised as the efficacious or inefficacious feelings toward future interactions with people with disabilities. These interactions take a professional form e.g. 'I am able to plan and organise appropriate activities for my students/clients', 'I can adapt practices to suit individual needs'. Thus, the SEIPD taps attitudes toward interactions which are of a professional nature.

The second author-constructed scale, The Mandatory Contact Scale (MCS), investigated contact with people with disabilities undertaken as part of the mandatory disability unit. Contact with people with disabilities is identified in related research literature as a variable worthy of further investigation in relation to attitude formation (Wright, 1988; Chubon, 1992).

Items in the Contact Scale (MCS) were developed from a variety of sources. Both intrinsic and extrinsic factors related to students' contact with people with disabilities were taken into account.

Extrinsic factors include the preparation and support given to respondents prior to and during the practicum, such as pre-requisite knowledge and information, skill development, expectation and support from university and placement staff. Intrinsic factors included respondents' ability to overcome their fears about interaction and

their personal view of people with disabilities in terms of a succumbing or coping framework (Wright, 1988). Content validity and reliability of all author constructed measures was undertaken.

Questionnaires including both closed and open ended questions were also developed and administered to collect both demographic and qualitative data. These included questions related to students' views on the necessity for knowledge of the disability area, their comment on the contact component of the mandatory unit and their description of their role with people with a disability .

Results

Descriptive and inferential analyses were undertaken and are discussed below.

Descriptive information

Distributions of intended career and study choices are shown in Table 1. It can be seen that the majority of the teaching students (90%) would consider working in a primary school which integrated students with disabilities. On the other hand, only 13% of nursing students would choose to work in the disability field in the following year. More than half of the teaching students (60%) would definitely consider specialising in special education in the future, whereas only 26% nursing students stated they would definitely consider working in the disability field at some time in the future.

In regard to students' future study plans, nearly all teaching students would consider either certainly (59%) or possibly (36%) undertaking post-graduate study in the disability or special education field whereas the majority of nursing students (65%) would not consider undertaking post-graduate study in this area. However, with the exception of a few students, a substantial number of both teaching and nursing students would consider undertaking some post-graduate study in another area (54% and 78% respectively), showing a moderate to strong interest in further study.

Qualitative analysis of nursing students' reasons for not choosing to work in the disability field found that the majority thought it was not their 'cup of tea', or 'do not feel comfortable' (68%), preferred another area of nursing, usually general (20%), would only take it on if desperate for a job (6%) or stated that future career prospects were limited (6%).

The majority of nursing and teaching students believe that they require knowledge of disability and special education (96% and 99% respectively). A further 98% teaching students and 96% nursing students agreed that their respective professions needed specific knowledge and skills in this area. Nearly all students (98% teaching, 96% nursing) believed that the contact experience which formed part of

the mandatory disability unit was necessary and the majority (72% teaching 59% nursing) were satisfied with these contacts (see Table 1).

However, a small number of teaching students stated that the contact was too short in duration while larger numbers of nursing students said they felt uncomfortable in the placement environment, specifically institutional settings.

When asked about the role of the nurse in the disability field, nursing students gave a range of descriptions, the majority falling within a medical model. Role descriptions ranged from caregiver (25%) to assisting with activities of daily living (20%), administrator of medication (20%), assisting people gain independence (15%), as an advocate (6%), educator/teacher (4%). A further 10% of nursing students were unsure of their role in working with people with a disability.

Results of inferential analyses

This section of the paper discusses results of an examination of the relationship between attitude constructs and students' choice of future career and post-graduate study.

The results of one way Student Type X Future Career variable ANOVAs

were tabulated (see Table 2 and Table 3). As shown in Table 2, students who considered working in the special education or disability nursing field the year after graduation or in the future, or were interested in undertaking post-graduate study in this field, were significantly more positive in their general attitudes to people with disabilities as measured by the ATDP and had higher levels of self-efficacy regarding interactions with people with disabilities as measured by the SEIPD. These results suggest that students with more positive general attitudes toward people with disabilities are more likely to choose to work in the special education/disability field relative to those with more negative general attitudes. Also, students with more positive general attitudes reported greater interest in undertaking post-graduate study in special education/disability compared to those with more negative attitudes. Furthermore, students with higher levels of self-efficacy toward future interactions with people with disabilities were more likely to choose to work in the special education/disability field and undertake post-graduate study in this area were also supported. Students considering post-graduate study in an alternative area to special education or disability nursing had higher levels of discomfort in social interaction (IDP).

Students' evaluations of the mandatory contact experience of working with people with a disability were then undertaken to assess the relationship between the mandatory contact experience and their attitudes. Quite consistent patterns of relationship were evident (see Table 3). As would be expected, students who would consider working in the special education/disability field in the next year or in the future, or would consider post-graduate study in this field were invariably more positive in their assessment of their mandatory placement in terms of the general experience, the level of support

given by the university, the placement environment as it affected both themselves and people with a disability and their self-rating of success of professional interactions with people with disabilities. An analysis of contact variables was undertaken to assess the influence of the mandatory contact placement upon choice of career and post-graduate study (see Table 4). It was found that students who would consider working in the disability/special education field next year or in the future had contact with younger subjects both in their general contact and placement contact. They also rated themselves as possibly gaining higher marks in their respective mandatory disability units. Conversely, those students considering post-graduate study areas other than special education or disability had a lower level of acceptance of people with disabilities and had experienced contacts with older subjects in their university placements.

Discussion

Results of this examination of relationships between the attitude constructs and the mandatory contact experience with students' future career and post-graduate study choices, yielded a number of interesting findings. It is noted that these post-hoc results must be interpreted cautiously.

The finding that teaching students reported willingness to teach students with disabilities in their classrooms and expressed interest in undertaking post-graduate study in special education, is of note, although some caution must be applied as the mandatory unit is not a unitary variable. However, the importance of achieving positive teacher attitudes as the first step toward the successful integration of students with disabilities, cannot be overstated.

At present, beginning teachers in NSW who are employed in the independent and non-government education sectors are not required to undertake study in special education. As the integration of students with disabilities and learning difficulties has been common practice in all systems of education for many years, there is a clear need for the implementation of similar policy initiatives.

The fact that only 32% of nursing students stated that they were definitely or possibly interested in working with people with disabilities in the future is of interest. This is even more notable when compared with the vast majority of teaching students (i.e. 96%) expressing interest in working in special education or in a mainstream school which integrated students with disabilities in the future.

It must be noted here that the figures for nursing students may be inflated by extreme shortages of nursing positions in general hospitals in NSW at this time (due to the over-supply of nurses). Thus, the likelihood of graduates applying for positions in the speciality areas of psychiatric and developmental disability nursing, where jobs were still available, was higher than it would normally be. Although it would be expected that new practitioners may choose to work in a general area of nursing as their first preference after graduation, the large numbers stating they may never choose to work with people with

disabilities is concerning when students are trained in this specific area and qualify for registration as developmental disability nurses. Policy implications related to mandatory curriculum and nurse registration requirements are evident from these findings.

Results of one-way ANOVAs show a number of significant relationships between the attitude constructs with both future career and post-graduate study choice. The influence of negative attitudes, higher discomfort in social interaction and lower level of self-efficacy on students' choice of future career and post-graduate study was of concern. The influence of the nature of placement contact on future career choice was evident. Students with positive contact experiences were more likely to choose to work in the disability field than those who assessed their major placement negatively. Results were similar for post-graduate study choice as students with positive assessments of practicum more likely to choose post-graduate study in the special education/disability area. Thus, the nature of contact with people with disabilities can be isolated as a variable influential in future career and study choices. This has implications for related practicum placements and policy development.

An analysis of qualitative data reporting nursing students' reasons for not choosing to work in the disability field gives further explanation to the quantitative data. The majority of nursing students (68%) stated that working with people with disabilities was not their 'cup of tea' or they 'felt uncomfortable' and that they preferred another area of nursing. Smaller numbers said they would only work in the field if they were desperate for a job and that the disability area did not offer comparative career prospects. Students were also asked to describe how they perceived their role as nurses in the disability field. Results showed evidence of role confusion, with the majority of students (65%) stating that their role had a medical or caregiver orientation, 15% saw their role as assisting independence, 6% as an advocate and 4% as an educator or teacher. A further 10% were unsure of their role. These results suggest the need for further discussion relating to the career prospects for nurses in the disability field and the nature of their role in this area. They also support research reporting a relationship between role certainty and job satisfaction (Guzik et al, 1992) and Beyer's (1992) call for more extensive research into the relationship between career variables and role perceptions. There are also clear implications for those involved in both the development of undergraduate nurse education curricula and registration requirements.

The findings presented in this paper related to nursing students' attitude formation and resultant career and study choices suggest that a closer examination of the mandatory inclusion of specialised disability study in nurse education programs may be necessary. Issues related to the organisation of practicum, the adequate support and preparation of students, the need for appropriate curriculum content

along with a review of theoretical models of disability presented in

nursing curricula, are all relevant. Although it must be acknowledged that the majority of nursing graduates choose general nursing as their initial preference (Morris & Wang, 1989), it is of concern that so few would consider working with people with disabilities when they have undertaken mandatory study in this area and are registered in this specialisation. These findings have major implications for those involved in the development and delivery of both the theoretical and clinical components of the mandatory disability units.

One major recommendation from these findings is the necessity for a review of theoretical models of disability currently underpinning undergraduate nurse education curricula.

The dissonance between a bio-medical model with a focus on aetiology, illness and cure, and a socio-political model with a focus on human rights and the social construction of disability, is reflected in both the literature (e.g. Rioux & Bach, 1994) and the findings of the present study. It is clear that nursing students see their role as having a strong caring and curative orientation, as evidenced from self reports. The possibility that nursing students feel dissonance regarding their identity and role in the disability field must be acknowledged and addressed. Contemporary philosophies of community inclusion and habilitation do not fit within a medically oriented model. It is critical that current philosophies and practices of service provision and current theoretical models of disability are reflected within any disability specific curricula.

The most appropriate form of professional training for nurses who wish to maintain a speciality in the disability area must also be addressed.

It is evident from the findings of this study, that the majority of beginning nurses are not interested in pursuing a career in the disability field or in undertaking related post-graduate study. This suggests that the undergraduate arena is perhaps not the most appropriate place to specialise in a disability-oriented profession and questions the inclusion of discrete disability study in undergraduate nurse education. It is possible that post-graduate courses with a broader base, which focus on the community integration of people with disabilities from a socio-political, rather than a medical perspective, would give nurses a more appropriate theoretical background and wider career options than previously afforded.

Conclusion

In conclusion, it is recommended that mandatory study in special education be implemented as policy across all systems of teacher education. It is cautioned, however, that this recommendation is not used as a rationale for the discontinuation of postgraduate studies in special education or integration. Self-reports of teaching students stating the necessity for specific skills and competencies to teach students with disabilities and their high the level of interest in undertaking post-graduate study in special education or integration, suggest an ongoing need for both undergraduate and post-graduate offerings. It is further suggested that the 13 week unit should be expanded and include more specifically focussed interactions with students with disabilities and learning difficulties.

Implications and recommendations specific to nurse education are also apparent. The inclusion of mandatory disability units in undergraduate nurse education is challenged although it is noted that all prospective nurses need knowledge of people with a disabilities. What form this knowledge takes and where it is best placed in their tertiary education is the question to be addressed.

The results of this study challenge those involved in the development of curricula for tertiary nurse and teacher education students to closely monitor, evaluate review and debate the inclusion of mandatory disability study in related undergraduate programs.

Table 1
Distribution of future career variables and study choices by student type

Item No.	Item content	Student Type	Response Categories	% (N)
	Yes	Poss'	ly	No
1	Work in integrated school after graduation	Teacher	90 (77)	6 (5) 4 (3)
	Work in disability field after graduation	Nurse	13 (11)	24 (21) 63 (56)
	Prim.ESL	Pre-school	0	other
2	Area intend to work after grad'n	Teacher	90 (76)	8 (7) 1 (1) 1(1)
	General	Psych	Disab.	0
	Nurse	63 (56)	4 (4)	1 (1) 32 (28)
	Yes	Poss'	ly	Never
3	Work in special ed in future	Teacher	60 (51)	36 (31) 4 (3)
	Work in disability field in future	Nurse	26 (23)	52 (46) 22 (19)
	Yes	Poss'	ly	No
4	Post-grad study in special ed	Teacher	59 (50)	36 (31) 5 (4)
	Post-grad study in disability	Nurse	3 (3)	32 (28) 65 (57)
	Yes	Poss'	ly	No
5	Post-grad study in another area	Teacher	54 (44)	40 (33) 6 (5)
	Nurse	78 (69)	18 (16)	4 (4)
	Yes	No		
6	Teachers need this knowledge	Teacher	99 (84)	1 (1)
	Nurses need this knowledge	Nurse	96 (82)	4 (3)
7	Teachers need specific skills	Teacher	93 (78)	7 (6)
	Nurses need specific skills	Nurse	78 (68)	22 (19)
8	Contact with people with disability necessary	Teacher	98 (82)	2 (2)
	Nurse	54(44)	4 (38)	
9	Contact experience satisfactory	Teacher	72 (60)	28 (23)
	Nurse	54 (44)	40 (33)	

Table 2 ANOVAs of ATDP, IDP, and SEIPD (data collection years 2 and 3) by future career and study choice

Item	No	Year 2	ATDP	IDP	Self-Efficacy
1	Work in disability field	Yes	84.06	62.72	2.81
	No	76.97	66.13	3.71	

F-value 15.60***3.45 ***26.17
 3Work in disab't y field in futureYes83.2263.002.74
 No80.0864.783.47
 F-value 2.99.97 ***16.69
 4Post-grad in disabilityYes82.7464.652.93
 No80.3263.783.37
 F-value 1.81.245.99*
 5Post-grad study in other areaYes80.9665.733.33
 No82.0361.332.82
 F-value .315.54*6.70*
 9Contact exp satisfactoryYes81.0964.103.29
 No82.6665.282.67
 F-value .46.287.44**
 Year 3
 1Work in disability fieldYes84.9862.982.58
 No80.4562.753.56
 F-value 7.51** .02 ***72.20
 3Work with disability in futureYes85.9962.122.53
 No81.3663.483.23
 F-value 8.33** .82 ***32.91
 4Post-grad in disabilityYes85.0162.672.59
 No81.7763.653.23
 F-value 4.02*.15 ***26.43
 5Post-grad study in other areaYes82.8763.583.01

No83.5062.432.82
 F-value .13.541.79
 9Contact exp satisfactoryYes83.0262.802.90
 No84.8863.193.01
 F-value .77.04.40

*p < .05, ** p < .01, *** p < .001

Table 3: ANOVAS of MCS (data collection Years 2 and 3) by future career and study choice

Item
 NoEnviroSupportPosi
 tiveInter
 act
 Year 2
 1Work in disability Yes2.773.662.822.90
 fieldNo3.914.423.923.69
 F-value 18.01***7.98**20.42***12.49***
 3Work in area in futureYes2.683.532.782.85
 No3.594.233.553.47
 F-value 11.32***6.75*10.20**7.73**
 4Post-grad in disabilityYes2.883.662.912.99
 No3.544.223.533.43

F-value 5.94*4.54*6.74*3.96*

5 Post-grad study in Yes 3.344.083.343.30
other area No 2.993.683.023.06
F-value 1.452.051.55.98

9 Contact exp Yes 3.404.153.343.32
satisfactory No 2.643.242.872.87
F-value 4.69*7.37**2.172.45

*p < .05, ** p < .01, *** p < .001

Table 3 (continued)

Year 3

1 Work in disability Yes 2.893.682.802.65
field No 4.904.694.213.89
F-value 47.33***17.15***28.55***28.28***

3 Work in area in future Yes 2.743.622.832.68
No 4.464.473.853.58
F-value 27.65***10.49**11.85***12.16***

4 Post-grad in disability Yes 2.993.753.002.73
No 4.564.463.843.63
F-value 19.98***7.79**8.33**12.80***

5 Post-grad study in other Yes 3.984.273.613.33
area No 3.734.133.413.22
F-value .43.27.39.15

9 Contact exp Yes 3.724.103.393.15
satisfactory No 4.894.924.334.05
F-value 4.19*3.303.854.16*

*p < .05, ** p < .01, *** p < .001

Table 4: ANOVA of Contact Variables and Performance Rating (Years 2 and 3) by Future Career and Study Choices

Year 2 Frequency Age Feeling Age
of general about uni
contact contact contact contact

1. Work in Yes 3.444.382.393.54
disability No 3.455.192.704.59
field F-Value .0111.33***5.482.67***

3. Work in Yes 3.454.452.423.45
disability No 3.444.852.584.32
in future F-Value .002.871.3315.55***

4. Post-grad inYes3.444.592.373.72
disabilityNo3.454.732.644.16
F-Value.00.334.03*3.71
5. Post-grad Yes3.374.772.644.16
study in No3.624.432.283.59
another areaF-Value1.501.886.62*5.49*
9. Contact Yes3.454.712.614.00
experienceNo3.504.472.163.81
satisfactoryF-Value.05.636.81** .40
- Year 3
1. Work inYes3.434.593.75
disability No3.795.344.52
fieldF-Value3.788.13***8.62**
3. Work inYes3.444.523.82
disability No3.655.134.24
field in futureF-Value1.425.47*2.43
4. Post-grad inYes3.476.643.82
disabilityNo3.655.124.31
F-Value.873.493.31
5. Post-grad Yes3.615.004.19
study in No3.444.633.92
another areaF-Value.741.83.86
9. Contact Yes3.505.024.13
experienceNo3.874.313.78
satisfactoryF-Value2.394.43*.83
- *p< .05, **p< .01, ***.001.

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