Pharmacists’ Attitudes and Emotional Reactions Toward Mentally Handicapped Patients: Implications for Providing Pharmaceutical Care

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This study used a mail survey to examine 1,000 pharmacists’ attitudes and emotional reactions toward mentally handicapped patients. A total of 388 pharmacists participated in the study with a 41.0 percent response rate. Overall, pharmacists were found to have slightly positive basic attitudes toward these patients on the following four aspects: effect on family, place or value and acceptance in society, quality of life, and independence and autonomy. They also had slightly positive overall attitudes and emotional reactions. Additionally, younger pharmacists and pharmacists who had prior experience with mentally handicapped people were more likely to have positive basic attitudes and emotional reactions than their counterparts. The results of this study support the development of educational programs which provide pharmacists with enlightening information regarding mentally handicapped patients.

INTRODUCTION

A study has shown that many people have little knowledge or experience with individuals challenged by various physical and/or mental handicaps. People are usually unsure of how to communicate with such individuals and hold some negative attitudes toward them(1). Based on Adler's et al. findings, measures of people’s attitudes and opinions can be used as predictors of their future behaviors(2). It can be hypothesized that prior social contact, knowledge, and experience with mentally handicapped people also affect pharmacists’ attitudes and emotional reactions toward their patients challenged with handicaps. Studies indicate that health professionals who have greater professional contact and less social distance from handicapped people demonstrate higher levels of understanding and caring in their interactions with them(3). Because pharmacists’ attitudes and behaviors can be crucial determinants in successfully providing quality pharmaceutical care to such patients, it is important that we are able to gauge how they feel about these patients.

The pharmacist has an extremely important role to play in health care provision to mentally handicapped individuals, in particular. A large number of these patients, like many older patients, often use several types of drugs at a given time. These medications, ranging from anticonvulsant to antidepressant drugs, taken in conjunction with the handicapped patients' largely sedentary and restricted lifestyle, produce many negative side effects and symptoms(4). For example, the use of anticonvulsants, particularly harmful in long term use, can lead to the depletion of folic acid and other elements necessary for bone growth; lithium therapy can interfere with thyroid function. Oftentimes the medications administered to mentally handicapped individuals are unnecessary and inappropriately used(4). The pharmacist, as the health care professional most knowledgeable about medications and their proper usage, can lend a great deal of effort to improve health care services to mentally challenged patients. Pharmacists can provide better service to handicapped patients if they have positive attitudes toward these patients. Many studies have shown that social contact between handicapped and non-handicapped people can improve relationship, attitude, and understanding of both parties(5-15). Such improvement can aid health care providers to show empathy and select an appropriate approach to provide services to their patients.
Although there are studies that investigate the public, students, and some health professionals' attitudes toward mentally handicapped people, specific data on pharmacists' and pharmacy students' attitudes toward these patients are still limited. This study serves as an exploratory study to measure pharmacists' attitudes and emotional reactions toward mentally handicapped individuals. If pharmacists are found to have largely negative attitudes toward these patients, an educational program needs to be designed and developed to provide pharmacists with enlightening information regarding mentally handicapped patients.

**OBJECTIVES AND HYPOTHESES**

The objective of this study was to examine pharmacists' attitudes and emotional reactions toward mentally handicapped patients. In addition, the relationship of certain demographic and other related variables to attitudes and emotional reactions was examined. Based on previous studies(5-15), two hypotheses were tested in this study as follows:

**H1**: Pharmacists who have prior experience with mentally handicapped people are more likely to have favorable attitudes toward them than pharmacists who have no experience.

**H2**: Pharmacists who have prior experience with mentally handicapped people are more likely to have positive emotional reactions toward them than pharmacists who have no experience.

**METHODS**

**Experimental Plan**

This study was conducted between June 1995 and March 1996. It was divided into three phases (planning, implementation, and evaluation). During the planning phase, a questionnaire was developed using study instruments by Nursey *et al.* (3) and Beh-Pajooh (13). It also was pre-tested with pharmacy faculty members at the College of Pharmacy. Their feedback and comments were used to modify the questionnaire. The implementation phase began with the purchase of a mailing list of 5,000 pharmacists nationwide. This mailing list was obtained from Medical Marketing Service Incorporated and programmed to randomly select 1,000 retail pharmacists from every zip code in the United States. In the first mailing, a cover letter, the final version of the questionnaire, and a pre-addressed postage-paid envelope were mailed to all subjects in the study. A deadline was set for the respondents to return the questionnaires. Each subject was assigned a four-digit identification number for follow-up. Those who returned the questionnaires and those who wished not to complete the questionnaires were checked off from the mailing list. Returned mailings with forwarding addresses were relabeled and mailed out a second time. Approximately two weeks after the deadline, a second cover letter and another questionnaire were mailed to those subjects who had not responded to the first mailing.

The PC-SAS (Personal Computer-Statistical Analysis Software) was used to perform data analyses (16). Owing to multiple tests, Bonferroni was used to adjust the P value and an alpha level of 0.005 (0.05/10) was chosen as the level of significance for the study. Frequencies, means, and standard deviations were computed for all continuous variables. To test the two study hypotheses, Mests were used to determine the differences in the mean attitude score (H1) and the mean emotional reaction score (H2) between pharmacists who had prior experience with mentally handicapped people and pharmacists who had no experience.

**Study Instrument**

In this study, mentally handicapped individuals were defined as those people who are mentally retarded or living with severe mental disabilities (3). The questionnaire was comprised of four parts. Part one contained 49 items focusing on Nursey *et al.*'s (3) four aspects of a mentally challenged person's life. This section investigated pharmacists' four basic attitudes regarding 12 items on the effect on family, 13 items on the place or value and acceptance in society, 13 items on the quality of life, and 11 items on the independence and autonomy (3). Participants were asked to respond to the series of questions by indicating their level of agreement and/or disagreement on a continuous five-point scale, ranging from strongly disagree (1) to strongly agree (5).

In part two of the questionnaire, the Attitude Scale (AS) by Beh-Pajooh's (13) was used to measure both overall positive (15 items) and overall negative attitudes (13 items) toward severely handicapped patients. To compute the overall attitude score for each subject on the AS, a score of +2 was given to 'strongly agree' and a score of +1 was given to 'agree' on attitude items that show favorable attitudes. A score of -2 was given to 'strongly disagree' and a score of -1 was given to 'disagree' on attitude items that show unfavorable attitudes. The scoring was reversed for the items presenting negative attitudes. The overall attitude score for each subject was then summed. According to this, the possible overall attitude scores varied from -56 (the most negative attitude) to +56 (the most positive attitude).

Part three of the study used the Emotional Reaction Scale (ERS) which was previously used by Beh-Pajooh (13). The ERS contained four items for measuring positive emotional reactions and four items for measuring negative emotional reactions. The same procedure was used to compute the overall emotional reaction score for each subject on the ERS. A score of +1 was given to 'yes' and a score of -1 was given to 'no' answers for the four positive items. Conversely, a score of -1 was given to 'yes' and a score of +1 was given to 'no' answers for the four negative items. The overall emotional reaction score for each subject was then computed. Based on this, the possible overall emotional reaction scores ranged from -8 (the most negative emotional reaction) to +8 (the most positive emotional reaction). It was noted that a score of zero (0) was given to any neutral answers (don't know or undecided) for both the Attitude Scale and the Emotional Reaction Scale. Finally, part four of the questionnaire contained questions related to demographic variables (gender, age, ethnic group, marital status, highest degree, and year of license), practice setting, level of educational preparation and training, and prior experience with mentally handicapped people.

The study instrument is shown in Appendix A. For each of these three scales (the four basic attitudes, the Attitude Scale, and the Emotional Reaction Scale), an item analysis was run using Cronbach's Alpha to check the internal consistency reliability. According to Nunnally (17), Cronbach's alpha should be at least 0.70. Using this as a standard, it was found that alphas were acceptable for the Attitude Scale (range = 0.88 to 0.90), Emotional Reaction Scale (range= 0.94 to 0.95), and the three basic attitudes’ subscales including the effect on family (ranges= 0.85 to
0.88), independence and autonomy (range= 0.72 to 0.80), and place in society (range= 0.69 to 0.73). However, the quality of life subscales had lower alphas (range= 0.27 to 0.54) compared to the others.

**DISCUSSION OF RESULTS**

**Sample Description**

Of the 388 pharmacist respondents, most of them were White (90.2 percent), male (68.3 percent), married (80.4 percent), and had a bachelor of science in pharmacy degree (90.2 percent). The mean age was 45.2±13.2 years old and the mean number of years of practice was 20.4±13.2 years old. Almost half of the respondents were primary practicing in independent (47.2 percent) and chain pharmacies (43.6 percent). All respondents represented graduates from 75 Colleges of Pharmacy. The top five highest number of respondents were pharmacists graduated from Massachusetts College of Pharmacy and Allied Health Sciences (3.6 percent), Philadelphia College of Pharmacy and Science (3.1 percent), Ohio State University (3.1 percent), Auburn University (2.6 percent), University of Illinois at Chicago (2.6 percent), and St. Louis College of Pharmacy (2.6 percent).

Other than the demographic information, pharmacist respondents also were asked whether or not they had any prior experience with mentally handicapped patients and whether or not they had received any types of educational preparation and training related to knowledge and interaction with mentally handicapped patients. As a pharmacist, a majority of the respondents (93.6 percent) had experienced at least one contact or interaction with mentally handicapped people. Of these, 3.4 percent of them always (100 percent of time) contacted or interacted with mentally handicapped people, 19.8 percent were seldom (25 percent of time), 24.2 percent were frequently (75 percent of time), and 46.4 percent were sometimes (50 percent of time). When they were pharmacy students, over half of them (52.6 percent) had experienced at least one contact or interaction with mentally handicapped people. Less than one percent (0.3 percent) of these pharmacy students always (100 percent of time) contacted or interacted with mentally handicapped people, 6.7 percent were frequently (75 percent of time), 21.4 percent were seldom (25 percent of time), and 25.5 percent were sometimes (50 percent of time).

Most of the respondents (90.0 percent) indicated that while in pharmacy school their pharmacy schools did not provide any types of educational preparation and training related to mentally handicapped patients. When they were asked to rate their pharmacy educational preparation and training on their knowledge of mentally handicapped patients, the highest number of them rated their knowledge as poor (37.6 percent), followed by average (35.6 percent), very poor (18.6 percent), good (6.2 percent) and excellent (0.8 percent) respectively. In terms of their educational preparation and training on how to appropriately interact with mentally handicapped patients, the highest number of them rated their ability as poor (41.8 percent), followed by average (33.2 percent), very poor (18.0 percent), good (4.6 percent) and excellent (1.5 percent) respectively.

**Pharmacists' Basic Attitudes Toward the Four Aspects of Mentally Handicapped People**

In this section, pharmacists were asked to use a continuous five-point scale, ranging from strongly disagree (1) to

<table>
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<tr>
<th>Variable</th>
<th>N</th>
<th>Mean±SD*</th>
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<th>P</th>
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<td>Married</td>
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<td>3.37±0.70</td>
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<td>Ethnic group</td>
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<tr>
<td>White</td>
<td>348</td>
<td>3.36±0.68</td>
<td>1.3718</td>
<td>0.1781</td>
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<tr>
<td>Non-White</td>
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<td>Practice setting</td>
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<tr>
<td>Independent</td>
<td>182</td>
<td>3.29±0.74</td>
<td>1.8809</td>
<td>0.0608</td>
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<tr>
<td>Chain</td>
<td>168</td>
<td>3.43±0.63</td>
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<td>Degree</td>
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<td>B.S.</td>
<td>348</td>
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<td>0.1669</td>
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<tr>
<td>Graduate</td>
<td>32</td>
<td>3.51±0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;45 years</td>
<td>200</td>
<td>3.45±0.68</td>
<td>3.0744</td>
<td>0.0023*</td>
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<tr>
<td>45-85 years</td>
<td>183</td>
<td>3.23±0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>License year</td>
<td></td>
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<tr>
<td>&lt;20 years</td>
<td>193</td>
<td>3.43±0.67</td>
<td>2.5950</td>
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<td>20-63 years</td>
<td>188</td>
<td>3.25±0.70</td>
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<tr>
<td>As a pharmacist, have you ever contacted or inter-acted with mentally handicapped people?</td>
<td></td>
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<tr>
<td>Yes</td>
<td>361</td>
<td>3.37±0.69</td>
<td>2.1726</td>
<td>0.0394</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>3.06±0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When you were a pharmacy student, had you ever contact-ed or interacted with mentally handicapped people?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>202</td>
<td>3.47±0.68</td>
<td>3.9746</td>
<td>0.0001*</td>
</tr>
<tr>
<td>No</td>
<td>181</td>
<td>3.20±0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did your pharmacy school provide any types of educational training related to mentally handicapped patients?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>38</td>
<td>3.55±0.60</td>
<td>2.1679</td>
<td>0.0351</td>
</tr>
<tr>
<td>No</td>
<td>347</td>
<td>3.32±0.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The possible total basic attitude scores vary from 1 (the most negative basic attitude) to 5 (the most positive basic attitude).

P<0.005.

strongly agree (5), to indicate their agreement and/or disagreement on 49 statements related to the four aspects of mentally handicapped people. These four aspects were the effect on their families (12 statements), the place or value and acceptance of people with mental handicaps in society (13 statements), their quality of life (13 statements), and their right to independence and autonomy (11 statements). The items were combined and the mean score of each aspect was computed from a set of the statements so that each respondent had four mean scores representing his or her basic attitudes toward the four aspects.

Overall, pharmacists in the study had slightly positive basic attitudes toward mentally handicapped people on the four aspects, effect on family (mean=3.31±0.67), place or
value and acceptance in society (mean=3.51±0.40), quality of life (mean=3.38±0.30), and independence and autonomy (mean=3.13±0.51). Tables I-IV show pharmacists’ responses to these four aspects across demographic and other related variables. According to these, significant differences in the effect on family and quality of life were found between younger (<45 years old) and older (45-85 years old) pharmacists and between pharmacy students who had previously contacted or interacted with mentally handicapped people and those who had not. In both cases, younger pharmacists and pharmacy students who had previously contacted or interacted with mentally handicapped people were more likely to have positive effect on the family and positive quality of life than their counterparts. Additionally, pharm-

macy students who had prior experience with mentally handicapped people were more likely to have positive place or value and acceptance in society than those who had no experience. Finally, pharmacists who had prior experience with mentally handicapped people were more likely to have positive attitudes toward the rights of the mentally handicapped people’s independence and autonomy than those who had no experience.

Pharmacists’ Attitudes and Emotional Reactions toward Mentally Handicapped Patients

Using the Attitude Scale (AS), pharmacists were found to have slightly positive overall attitudes (mean=7.54±1.21; range =-56 to +56) on this scale. Table V shows pharmacists’
responses on the Attitude Scale across demographic and related variables. As can be seen in Table V, no significant difference was found in pharmacists’ overall attitudes across demographic and related variables. Table VI shows the frequency and percentage of pharmacists’ responses to the items on the Emotional Reaction Scale (ERS). According to Table VI, almost one-fourth of the pharmacists (23.5 percent) admitted that they did not know what to say to a severely mentally handicapped patient when he or she came to fill a prescription at the pharmacy. Also, more than one-fourth of them (29.4 percent) indicated that they did not know how to communicate with severely mentally handicapped patients. Using the emotional reaction scale (ERS), pharmacists were found to have slightly positive emotional reactions (mean=4.92±2.65; range =-8 to +8) on this scale. Table VII shows pharmacists’ responses on the Emotional Reaction Scale across demographic and related variables. It was found that pharmacists and pharmacy students who had previously contacted or interacted with mentally handicapped people were more likely to have positive interactions or emotional reactions than those who had not.

**LIMITATIONS**

The study had some limitations which should be considered when interpreting the results. Generalization of the results of this study was limited to the selected group of pharmacists participated in the study and the attitudes and emotional reactions as measured by the instruments used in this study. As related to the reliability of the scales used in this study,
Table VI. Frequency and percentage of pharmacists' responses to the items on the Emotional Reaction Scale (ERS)

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Don't know (%)</th>
<th>Did not answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know what to say?</td>
<td>276(71.1)</td>
<td>14(3.6)</td>
<td>91(23.5)</td>
<td>7(1.8)</td>
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<tr>
<td>Know how to communicate?</td>
<td>255(65.7)</td>
<td>12(3.1)</td>
<td>114(29.4)</td>
<td>7(1.8)</td>
</tr>
<tr>
<td>Feel embarrassed?</td>
<td>16(4.1)</td>
<td>347(89.4)</td>
<td>18(4.6)</td>
<td>7(1.8)</td>
</tr>
<tr>
<td>Feel scared?</td>
<td>16(4.1)</td>
<td>345(88.9)</td>
<td>19(4.9)</td>
<td>8(2.1)</td>
</tr>
<tr>
<td>Find it a good experience?</td>
<td>215(55.4)</td>
<td>22(5.7)</td>
<td>144(37.1)</td>
<td>7(1.8)</td>
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<tr>
<td>Find it enjoyable?</td>
<td>110(28.4)</td>
<td>64(16.5)</td>
<td>207(53.4)</td>
<td>7(1.8)</td>
</tr>
<tr>
<td>Find it tiresome?</td>
<td>26(6.7)</td>
<td>238(61.3)</td>
<td>117(30.2)</td>
<td>7(1.8)</td>
</tr>
<tr>
<td>Lose your concentration?</td>
<td>15(3.9)</td>
<td>306(78.9)</td>
<td>60(15.5)</td>
<td>7(1.8)</td>
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Table VII. Pharmacists' emotional reactions across demographic and other related variables

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<tr>
<th>Variable</th>
<th>N</th>
<th>Mean±SD*</th>
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<td>Female</td>
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<td>Prior experience with mentally handicapped people?</td>
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*The possible total emotional reaction scores vary from -8 (the most negative emotional reaction) to +8 (the most positive emotional reaction).

**P<0.005.

It should be noted that the quality of life subscale had a lower internal consistency reliability compared to the others. However, Bernardi(18) suggested that a low Cronbach’s alpha did not immediately put the results of the study into question. In addition, Anastasi(19) and Lehmann(20) also found that the reliability of the test instruments could be related to sample heterogeneity. Therefore, cautious interpretation of the results of this study is advised.

DISCUSSION AND CONCLUSION

The first hypothesis was rejected. No significant difference was found in pharmacists' attitudes toward mentally handicapped people between pharmacists who had prior experience with mentally handicapped people and pharmacists who had no experience. However, the second hypothesis was accepted. Pharmacists who had prior experience with mentally handicapped people were found to have more positive emotional reactions with mentally handicapped people than pharmacists who had no experience. In other words, pharmacists’ prior experience with mentally handicapped people does not affect their attitudes toward these people, but can influence their emotional reactions when providing pharmaceutical care to such patients. Although this study did not investigate how well our current pharmacists are providing pharmaceutical care to mentally handicapped patients, it was found that pharmacists in the study had on average, slightly positive, but not strongly positive attitudes and emotional reactions toward these patients. Also, there was a high number of respondents who never had any types of educational training related to mentally handicapped patients when they were pharmacy students. Finally, the study findings indicated that prior social contact or experience can influence the pharmacists' basic attitudes and emotional reactions toward these patients. Based on these findings, we believed that once more pharmacists have been exposed to or have had social contact or experience with mentally handicapped patients through an educational program such as a clinical rotation, a psychiatric rotation, or a shadowing program at some mental institutions, their experience may influence them to have more positive attitudes and emotional reactions toward these patients. Whether this prior social contact or experience can influence their behaviors to provide a better and high quality of care to this population group is an interesting subject for our future investigation.
In conclusion, pharmacist students in this study were found to have slightly positive basic attitudes on the four aspects (effect on family, place or value and acceptance in society, quality of life, and independence and autonomy) related to mentally handicapped people. They also had slightly positive overall attitudes and slightly positive emotional reactions toward mentally handicapped patients. In this study, pharmacist students' age and prior experience with mentally handicapped people were the two factors that were associated with their basic attitudes and emotional reactions toward mentally handicapped patients. When they were pharmacy students, less than ten percent of them had received any types of educational preparation and training related to mentally handicapped patients. More than half of the pharmacists gave a rating of very poor and poor for their pharmacy educational preparation and training regarding their knowledge (56.2 percent) and appropriate interaction (59.8 percent) with mentally handicapped patients. The results of this study support the development of educational programs which provide pharmacists with enlightening information regarding mentally handicapped patients.

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References

APPENDIX A. STUDY INSTRUMENT

Part One: Please write one of the numbers from 1 to 5 in the spaces provided using the continuous five-point scale to indicate your level of agreement.

1 = Strongly Disagree
2 = Disagree
3 = Neutral, No Opinion, or Undecided
4 = Agree
5 = Strongly Agree

Effect on Family
____ 1. I feel that having a severely mentally handicapped (MH) child is a terrible thing for most families.
____ 2. I feel that having a severely MH child is worse for most parents than having a still-born baby.
____ 3. I feel that having a moderately MH child is worse for most parents than having a still-born baby.
____ 4. I feel that having a moderately MH child is a terrible thing for most families.
____ 5. I feel that having a mildly MH child is worse for most parents than having a still-born baby.
____ 6. I feel that having a mildly MH child is a terrible thing for most families.
____ 7. I believe that having a child with a mental handicap gives parents a special sense of purpose in their lives.
____ 8. I believe that having a MH child has its positive side for most parents.
____ 9. I think that the positive side of having a MH child outweighs the negative side for most parents.
____ 10. I think that it is possible for most parents to love their MH children as much as normal children.
____ 11. I believe that most children with a mental handicap are burdens to their brothers and sisters.
____ 12. I think that having a MH child restricts most families socially.

Place in Society
____ 13. I feel that most MH people can make other people happy.
____ 14. I feel MH people are unpleasant to look at.
____ 15. I feel that most MH people do not contribute much to society.
____ 16. I think that most MH people are worth as much as normal people.
____ 17. I think that most moderately MH people could do useful jobs in a sheltered work place.
____ 18. I think most MH people look peculiar.
____ 19. I think that most MH people are well accepted by their neighbors and people who know them.
____ 20. I think that most severely MH people could do useful jobs in a sheltered work place.
____ 21. I think that it is impossible to hold an interesting conversation with most MH people.
____ 22. I feel that most people with a mental handicap are well accepted by their neighbors and people who know them.
____ 23. I feel that being with MH people brings out the best in most people.
____ 24. I think that some people with a mental handicap do things that are embarrassing in public.
____ 25. I think that most mildly MH people could do useful jobs in a sheltered work place.
Quality of Life

26. I think that most people with a mental handicap can get a lot out of their lives.
27. I believe that most people with a moderate mental handicap can be helped to live virtually normal lives.
28. I feel that it would have been better for most MH people if they had never been born.
29. I believe that most people with a mild mental handicap can be helped to live virtually normal lives.
30. I think that most people with a severe mental handicap still have their own personalities.
31. It seems to me that some MH people’s lives are not worth living.
32. I believe that most people with a mental handicap are just as capable of feeling emotions as normal people are.
33. I think that most people with a moderate mental handicap still have their own personalities.
34. I think that most MH people cannot make close independent friendships with other people.
35. I believe that most people with a severe mental handicap can be helped to live virtually normal lives.
36. I think that most people with a mild mental handicap still have their own personalities.
37. I believe that encouragement and care can help most MH children to do more than is initially expected of them.
38. I believe that most people with a mental handicap are usually unhappy.

Autonomy and Independence

39. I think it is best if most mildly MH people are prevented from having children.
40. It seems to me that most adults with a mental handicap cannot be expected to make decisions about their own future.
41. I believe that most mildly MH adults should be allowed to have sex if they wish to.
42. I think that it is best if most moderately MH people are prevented from having children.
43. I believe that most moderately MH adults should be allowed to have sex if they wish to.
44. I believe that most severely MH adults should be allowed to have sex if they wish to.
45. It seems to me that it is best for most people with a mental handicap if someone else makes the decisions for them.
46. I believe that most people with a mental handicap should be allowed to make up their own minds about where they live.
47. I believe that most people with a mental handicap will never be able to live completely independently.
48. I think that it is best if most severely MH people are prevented from having children.
49. I think that most people with a mental handicap should only be sterilized if they themselves agree to it.

Part Two: Please write one of the numbers from 1 to 5 in the spaces provided using the continuous five-point scale to indicate your level of agreement.

1 = Strongly Disagree
2 = Disagree
3 = Neutral, No Opinion, or Undecided
4 = Agree
5 = Strongly Agree

In your view, patients or people who are severely mentally handicapped (SMH):

1. Are honest and kind
2. Are clumsy and weak
3. Should be allowed to continue their education only at special schools
4. Should be allowed to continue their education at ordinary colleges

5. Should be allowed to use the refectory
6. Should be allowed to use the library
7. Should be allowed to mix only with their own group at the college
8. Have just the same problems as we have
9. Should be allowed to have a normal and regular life
10. Should not be allowed to have sexual relationships as non-handicapped people have
11. Should be allowed to mix with us in the college
12. Should be allowed to become members of the college students’ union
13. Have special problems apart from the problems that we have
14. Prefer to talk and play with other handicapped students rather than with us
15. Should not be allowed to vote in the college students’ union elections

Part Three: Please read each of the following questions and choose only one of the three answer choices: Yes, No, and Don’t Know.

Suppose tomorrow a patient with a severe mental handicap, whom you have never met before, comes and fills a prescription at your pharmacy, would you:
1. Know what to say? Yes No Don’t Know
2. Know how to communicate? Yes No Don’t Know
3. Feel embarrassed? Yes No Don’t Know
4. Feel scared? Yes No Don’t Know
5. Find it a good experience? Yes No Don’t Know
6. Find it enjoyable? Yes No Don’t Know
7. Lose your concentration? Yes No Don’t Know
8. Find it tiresome? Yes No Don’t Know
9. Find it a good experience? Yes No Don’t Know
10. Lose your concentration? Yes No Don’t Know

Part Four: Please mark your answers with ‘X’ or write them in the spaces provided.

What is your gender?

M___a___le ___F___e___m___a___l___e

What is your marital status?

S___i___n___g___l___e ___M___a___r___r___i___d
W___i___d___o___w___e___d ___E___n___g___a___g___e___d

In your view, if severely mentally handicapped (SMH) and non-handicapped (NH) students were to be integrated and taught together in regular classes at the college:

11. NH students would find it much easier to communicate with SMH people after leaving college
12. SMH students would need attention more than NH students
13. It would cause disturbances to routine educational activities
14. It would offer more opportunities for social interaction between SMH and NH students
15. It would give SMH students a better chance to prepare themselves for social life
16. It would be harmful for the education of NH students
17. It would have negative effects on the emotional development of SMH students
18. SMH students would feel uncomfortable around NH students
19. A SMH student would take more than his/her share of the teacher’s time
20. NH students would lose their concentration easily
21. It would be beneficial for the education of SMH students
22. For SMH students, it would be more important to learn social skills than academic skills
Divorced/Separated
Other, please specify

How do you describe yourself?
— White — Black —— Asian
— Hispanic — American Indian
— Other, please specify

What is the one that best describes your primary practice environment?
— Independent — Chain
— Other, please specify

What is the highest degree you have earned?
— Bachelor degree (B.S.)
— Master degree (M.S.)
— Doctoral degree (Ph.D.)
— Doctor of Pharmacy (Pharm.D.)
— Other, please specify

In what year were you born? 19

In what year were you first licensed to practice pharmacy? 19

From what College of Pharmacy did you graduate?

As a pharmacist, have you ever contacted or interacted with mentally handicapped people?
— Yes —— No

If yes, how often (% of time)?
— Seldom (25%) —— Sometimes (50%)
— Frequently (75%) —— Always (100%)

When you were a pharmacy student, had you ever contacted or interacted with mentally handicapped people?
— Yes —— No

If yes, how often (% of time)?
— Seldom (25%) —— Sometimes (50%)
— Frequently (75%) —— Always (100%)

When you were a pharmacy student, did your pharmacy school provide any types of educational training related to mentally handicapped patients?
— Yes —— No

How do you rate your pharmacy educational preparation regarding your knowledge of mentally handicapped patients?
— Very Poor —— Poor —— Average
— Good —— Excellent

How do you rate your pharmacy educational preparation regarding how to appropriately interact with mentally handicapped patients?
— Very Poor —— Poor —— Average
— Good —— Excellent