In an attempt to apply the theory of reasoned action (TRA) to the process underlying organ donor consent, participants completed questionnaires concerning their affective responses to organ donation, as well as their intentions to donate. Participants were given the opportunity to sign an organ donor card. Those who chose to sign the card had more positive attitudes about donation, perceived donation as something that their reference group would encourage, and had stronger intentions to consent to signing a card. The current investigation extends the organ donor literature by using a true behavioral outcome measure indicating consent. Moreover, the pattern of results between attitudes, norms, intention, and behavior illustrates the usefulness of applying the TRA to yet another health-related behavior.

According to the Center for the United Network for Organ Sharing (UNOS), there are currently over 80,000 people awaiting an organ transplant in the United States. While an average of six organ transplants are performed daily, 16 people die each day as a result of the lack of transplantable organs (UNOS, 2003). The best way to increase the number of transplantable organs—and, therefore, to decrease the number of deaths because of this shortage—is to persuade more people to consent to organ donation after death.

There are two ways in which a person typically consents to donation. First, a person can indicate in writing the willingness to become a postmortem donor. The individual can indicate consent by signing an individual
organ donor card, by placing one’s name on an organ donor registry, or by affixing an insignia to one’s driver’s license. Second, consent can be given on behalf of a family member after death.

In national polls, 60–80% of people surveyed indicated that they might be willing to sign an organ donor card. However, the national percentage of people who have actually signed an organ donor card is less than 20% (Horton & Horton, 1990; Kopfman, Smith, Yun, & Hodges, 1998). The importance of this disparity is highlighted when we understand that if only half of the individuals who indicated that they would be willing to sign a donor card actually did so, the list of 80,000 people awaiting transplants would be eradicated within approximately 2 years (Center for Organ Recovery and Education [CORE], 2003).

Clearly, there is a need for research that can potentially increase the supply of organs available for transplantation (Horton & Horton, 1990). Given the gravity of these numbers, it appears that organ procurement organizations such as UNOS and CORE must increase the number of people who agree to become organ donors after death.

Organ Donation Literature

Much of the literature on organ donation has focused on the demographic and psychological profiles of people willing to become organ donors. Horton and Horton (1990) reported that donors are more likely to be White than Black and to be of higher socioeconomic status than non-donors . . . more internally directed, have a more definite body image, accept mortality, fantasize more hostility, depression, and guilt, may be atoning and express humanitarian needs. (p. 1038)

The authors went on to suggest that altruism might play a part in the decision to sign an organ donor card.

In addition to these demographic and psychographic profiles of donors, there is also a small but burgeoning body of literature concerning the differences in knowledge about organ donation between donors and nondonors. Horton and Horton (1990) presented participants with 21 statements about organ donation and asked them to indicate whether the statements were True or False. The authors found a high number of incorrect responses to four of the statements. They concluded that the four misunderstood facts represented misconceptions about organ donation and were possible barriers to gaining the consent of potential organ donors.
The four barriers deal with the public’s misunderstanding of the potential religious implications of organ donation, how a potential donor is pronounced dead, the doctor’s role in the actual organ donation procedure, and which documents are necessary to become an organ donor. Furthermore, in a follow-up study, Horton and Horton (1991) found that knowledge of organ donation was related to whether people carried a signed organ donor card, or requested an organ donor card for the possibility of signing in the future.

Similar to Horton and Horton (1990, 1991), Morgan and Miller (2002) found significant knowledge differences between self-reported organ donors and non-organ donors on certain topics relating to organ donation. Specifically, they found that non-donors more than donors believed that organs can be purchased on the black market, that it is not possible to have a regular funeral service following organ donation, that it will cost family members money for individuals to donate organs, and that a person can recover from brain death.

Sanner and colleagues (Sanner, 1994; Sanner, Hedman, & Tufveson, 1995) reported on a campaign focusing on educating subjects about the realities of myths, misconceptions, and knowledge barriers found in previous research. Their campaign included mass-media advertising, as well as interpersonal interventions. The results indicated that most people who were initially reluctant to sign a donor card consented to do so after their misconceptions about organ donation were clarified.

In what may be the most comprehensive campaign to increase the number of consenting organ donors to date, Morgan, Miller, and Arasaratnam (2002) presented and tested their organ donor model (ODM) in designing and evaluating the Organ Donor Worksite Project. The ODM can be seen as an application or even an extension of the theory of reasoned action (TRA), as it incorporates variables such as attitudes, normative beliefs, values, and knowledge in an attempt to predict signing behavior. Results of the Organ Donor Worksite Project indicated that people who were exposed to educational messages about organ donor misconceptions were more likely to indicate that they were organ donors than were those in the control condition. In addition, the authors found that those respondents who indicated that they were organ donors had more positive attitudes toward donation, as well as more knowledge about organ donation.

Problems With Most Organ Donation Research

Much of the previous organ donor research has utilized behavioral intention as a dependent measure, rather than looking at rates of organ donor card signing. Morgan et al. (2002) provided a persuasive argument against using
such proxy measures of organ donation, citing the often weak relationship between intention and behavior. Instead, these authors advocated the use of a direct question concerning respondents’ current donor status.

Given the weak relationship between intention and behavior, asking about current status rather than intention makes more sense. However, while this may be a better measure of organ donor consent, it is still at least one step away from asking respondents to actually provide their consent to organ donation. The best way to truly test the relationship between attitudes, norms, and consent is by asking participants to sign an actual donor card. This is one way in which the current investigation hopes to add to the existing body of knowledge about the underlying processes involved in donor consent.

Research conducted by Sanner et al. (1995) and Horton and Horton (1990) illustrates the effectiveness of the TRA in understanding the impact of attitudes and knowledge on intention to consent. In addition, Morgan et al.’s (2002) extension of the TRA that is presented in the ODM looks at not only attitudes and knowledge, but also at how social norms are related to self-reported donor status. While these findings are vital in understanding the consent process, researchers must understand how these variables (i.e., attitudes, norms, knowledge) relate to the actual behavior in question (i.e., signing), in addition to these other proxy measures (i.e., intentions, self-reports). In other words, it is necessary to validate the usefulness of the TRA when the outcome is the actual behavior of signing a donor card.

Theory of Reasoned Action

The goal of the TRA is to explain what Fishbein and Ajzen (1975) termed behaviors of volition. That is, the scope of the TRA only includes behaviors that people perform because they chose to do so. Therefore, the TRA’s explanatory function does not include behaviors that are performed out of habit or that require special skills, resources, or opportunities (Eagly & Chaiken, 1993). In addition, the TRA assumes that people deliberate about the wisdom of their actions. Ajzen and Fishbein (1980) argued that people consider the implications of their actions before they decide to engage in a given behavior. As a result, they referred to their approach as a theory of reasoned action.

According to the TRA, an individual’s intention to perform a given behavior is the single best predictor of that person’s behavior. An intention represents a person’s conscious decision to exert some effort to enact a given behavior (Conner & Armitage, 1998). Intentions and behavior are believed to be strongly related to one another when measured at the same level of specificity (Fishbein & Ajzen, 1975).
Whereas the TRA proposes that intention is the best and most proximal predictor of behavior (Conner & Armitage, 1998; Sutton, 1998), intention is determined by two theoretically distinct dimensions. The first determinant of intention is the attitude an individual holds toward the behavior in question. An *attitude* is an affective or valenced response toward performing the specific behavior in question (Hale, Householder, & Greene, 2002). In other words, if the goal of a communication campaign is to get people to sign organ donor cards, then the relevant attitude is their attitude toward signing a donor card and not their attitude toward organ donation in general.

The second determinant to intention is called subjective norm. *Subjective norm* relates to a person’s belief about whether significant others think that he or she should engage in the behavior in question. *Significant others* are people whose opinions about the behavior in question are important to the person who is being asked to act (Eagly & Chaiken, 1993). At times, subjective norms may play a more dominant role than attitudes in influencing behavior (Gastil, 2000). The TRA would predict that if someone believes that people who are important to them would support the signing of a donor card, then they would be more likely to do so.

The TRA is a well known and widely referenced expectancy-value theory of behavior (Conner & Armitage, 1998; Sutton, 1998). As such, the amount of research conducted investigating the links between attitudes, subjective norms, intentions, and behavior has been described as voluminous (Hale et al., 2002). The TRA has been tested with regard to such diverse topics as drunk driving (Gastil, 2000), dental hygiene (McCaul, O’Neill, & Glasgow, 1988), use of contraceptives (Miller & Grush, 1986), smoking (Marin, Marin, Perez-Stable, Otero-Saabogal, & Saabogal, 1990), cancer examinations (Brubaker & Fowler, 1990), blood donation (Burnkrant & Page, 1988), seatbelt use (Budd, North, & Spencer, 1984), and voting behavior (Netmeyer & Burton, 1990).

In an attempt to summarize the results of the large number of investigations concerning the TRA, several researchers have conducted meta-analyses. The results of these meta-analyses have consistently found large effect sizes in norms’ and attitudes’ predictive power for intentions, and no less than moderate effect sizes in intentions’ ability to predict actual behavior (Ajzen, 1991; Conner & Armitage, 1998; Hale et al., 2002; Stewart & Roach, 1998; Sutton, 1998).

**The Present Study**

Morgan et al.’s (2002) ODM, which serves as an extension to the TRA, has been demonstrated to be predictive of self-reported donor status. In
addition, as was highlighted earlier, the TRA has been tested with regard to a number of other health-related topics. What has not been studied to date is the TRA’s ability to predict actual signing behavior. Since a number of researchers in the area of organ donation, as well as those conducting research using the TRA, have discussed the potential external validity concerns of using proxy measures as a substitute for actual behavior, it only makes sense to undertake an investigation testing the TRA’s ability to predict the real behavior of signing a donor card. As such, the following hypotheses are proposed:

**Hypothesis 1a.** Attitudes toward signing organ donor cards will be positively related to individuals’ intentions to sign them.

**Hypothesis 1b.** Attitudes toward signing organ donor cards will be more positive for those individuals who sign donor cards, as compared to those who do not.

**Hypothesis 2a.** People’s perceptions that their friends and family would advocate signing a donor card (i.e., subjective norm) will be positively related to their intention to sign the cards.

**Hypothesis 2b.** People’s perceptions that their friends and family would advocate signing a donor card will be more positive for individuals who sign donor cards, as compared to those who do not.

**Hypothesis 3.** People with greater intention to sign a donor card will sign donor cards at a significantly higher rate than those with less intention to sign a donor card.

**Method**

**Participants**

Study participants were 370 undergraduate students (182 male, 185 female, 3 did not report gender) from a large mid-Atlantic university who were enrolled in multiple sections of introductory communication courses. Participants were given extra credit for taking part in the study. They had other options to obtain extra credit, and the current study was approved by human subjects review.
Procedure

Participants attended research sessions outside of the classroom in groups ranging in size from 8 to 12. Each group received the same introduction to the study (see Appendix).

Once the introduction was concluded, participants received a questionnaire packet and a pamphlet from CORE (2003) containing two organ donor cards. Participants were instructed to place all experimental materials in a covered box on their way out the door to ensure the confidentiality of all responses and signing decisions. Participants were given 25 min to complete all materials. All participants completed the experimental materials in the time allotted.

Measures

Attitude toward organ donation. Attitude toward organ donation was measured using a six-item generalized attitude scale (McCroskey & Richmond, 1992; $M = 37.26$, $SD = 6.16$). Participants responded to a referent (in this case, their attitude toward organ donation) using six 7-point semantic differential items. The scale uses general descriptors such as good–bad and positive–negative to assess a person’s attitude. The attitude measure attained an alpha of .91 as a measure of internal reliability.

Subjective norms. To assess subjective norms, participants responded to three items similar to those used by Terry and Hogg (1996) in their study of exercise behavior. Participants responded on a 5-point scale ranging from 1 (none) to 5 (all) to indicate their perceptions of their reference group’s norms for performing the focal behavior (e.g., “How many of your friends would think that signing an organ donor card is a good idea?”; “How many of your friends would sign/have signed an organ donor card?”). The normative beliefs measure attained an alpha of .79 as a measure of internal reliability ($M = 10.69$, $SD = 2.06$).

Behavioral intention. Behavioral intention to sign an organ donor card was operationalized using two items similar to those used by Terry and Hogg (1996) in their study of exercise behavior. Participants responded on a 5-point scale ranging from 1 (definitely not) to 5 (definitely yes) to indicate their intention to sign a donor card (e.g., “I intend to sign an organ donor card”). The behavioral intention scale attained an alpha of .85 as a measure of internal reliability ($M = 7.24$, $SD = 2.21$).

Signing behavior. To track which participants signed an organ donor card and those who did not, each card was given a code number that coincided with the questionnaire packet completed by participants. At the completion
of the study, all signed organ donor cards were removed from the box containing the experimental materials so that they could be forwarded to CORE. It was at this time that a research volunteer was able to match signed organ donor cards with completed questionnaires. Of the 366 participants who completed the study, 65 participants (17.8%) returned signed organ donor cards. This number is consistent with the national signing rate.

Data Analysis

Hypotheses 1a and 2a were tested through the use of Pearson correlations. Hypotheses 1b, 2b, and 3 were tested by logistic regression. While Hypotheses 1b, 2b, and 3 could have been tested using $t$ tests, logistic regression analyses were deemed more appropriate since we are attempting to predict a nominal-level measure (i.e., behavior: signed or did not sign) based on parametric measures (i.e., attitude, norms, and intention).

Results

Hypotheses 1a and 2a proposed that the intention to sign an organ donor card would be positively related to both attitude toward signing and normative beliefs about signing a donor card. The results of Pearson correlations support these hypotheses, with both attitude toward donation ($r = .47, p < .01$) and normative beliefs about signing a donor card ($r = .51, p < .01$) being positively related to intention.

Hypotheses 1b and 2b proposed that individuals who have more positive attitudes and normative beliefs about signing a donor card will be more likely to sign a donor card. We conducted two logistic regression analyses in order to test these hypotheses.

The first regression entered attitude as the independent variable and signing status (signed or did not sign) as the dichotomous dependent variable. The results of this analysis support Hypothesis 1a, $\chi^2(1, N = 370) = 27.67, p < .01$ (Nagelkerke’s $R^2 = .12$), with signers ($M = 40.30, SD = 3.89$) scoring significantly higher on the attitude measure ($\beta = .18, p < .01$) than non-signers ($M = 36.57, SD = 6.38$). The second regression entered beliefs as the independent variable and signing status as the dichotomous dependent variable. The results of this analysis support Hypothesis 2a, $\chi^2(1, N = 364) = 27.90, p < .01$ (Nagelkerke’s $R^2 = .12$), with signers ($M = 11.83, SD = 1.83$) scoring significantly higher on the beliefs measure ($\beta = .41, p < .01$) than non-signers ($M = 10.43, SD = 2.02$).

In an attempt to control for any possible Type I error problems, an additional logistic regression was performed entering the attitude measure
along with the belief measure as independent variables and signing status as the dependant variable. The results of this analysis were significant, $\chi^2(2, N = 360) = 38.95, p < .01$ (Nagelkerke’s $R^2 = .17$). More importantly, the model illustrates that both attitudes ($\beta = .14, p < .01$) and beliefs ($\beta = .28, p < .01$) were significant predictors of signing status. These results lend further support for Hypotheses 1a and 2a.

Hypothesis 3 proposed that individuals scoring higher on the intention measure will sign donor cards at a significantly higher rate than those who (See Figure 1) score lower on the measure. The results of a logistic regression support Hypothesis 3, $\chi^2(1, N = 364) = 54.09, p < .01$ (Nagelkerke’s $R^2 = .23$), with signers ($M = 8.90, SD = 1.52$) scoring significantly higher on the intention measure ($\beta = .60, p < .01$) than non-signers ($M = 6.78, SD = 2.18$). (See Figure 1)

A final logistic regression was performed in order to fully test the TRA. The TRA suggests that the most proximal influence on behavior is intention. Furthermore, intention is predicted by the combination of attitudes and beliefs. Therefore, the TRA would suggest that intention’s ability to be predictive of behavior would subsume that of attitudes and beliefs. In other words, once the predictive power of intentions is removed, we would not expect attitudes and beliefs to be significant predictors of behavior.

In order to test this theory, a stepwise logistic regression was conducted. Variables were entered on the basis of unique variance accounted for. As could be expected, intention was the first variable entered into the model, $\chi^2(1, N = 359) = 53.90, p < .01$ (Nagelkerke’s $R^2 = .23, \beta = .60, p < .01$). After intention was removed, group norms failed to be a meaningful predictor of behavior. Moreover, while norms appeared to be a statistically significant predictor ($\beta = .12, p < .01$), their inclusion in the model added less than

![Figure 1. Theory of reasoned action with variance accounted for by each variable in model. (Note: Links between variables are included for visual representation of the model and do not indicate directionality.)](attachment:image.png)
3% of the total variance accounted for, $\chi^2(1, \ N=359) = 60.97, \ p < .01$ (Nagelkerke’s $R^2 = .25$). These results are similar to those reported in previous research testing the TRA (Conner & Armitage, 1998; Sutton, 1998).

Discussion

The present study tested the TRA as a comprehensive approach to understanding the proximal influences on signing behavior. Signing a donor card is a purposeful activity involving reason and judgment. The TRA maintains that the decision to engage in a purposeful activity is a function of a person’s attitudes, subjective norms, and intention to undertake a specific behavior (Ajzen & Fishbein, 1980; Eagly & Chaiken, 1993; Fishbein & Ajzen, 1975; Hale et al., 2002).

The results of the current investigation illustrate the usefulness of applying the TRA in yet another arena of human behavior. As noted earlier, while the TRA has been validated in the past with reference to such health behaviors as the use of contraceptives, smoking, cancer examinations, and blood donation, until now it had not been fully tested in the realm of organ donor consent. These results add to the burgeoning body of literature concerning the applicability of the TRA to a number of social behaviors. Even more important, with regard to TRA, is that while attitude and normative beliefs were related to both intention and signing behavior, they did not add in any significant manner to the predictive power of intention in predicting signing behavior. We would expect this since the TRA proposes that the most proximal determinant of behavior is intention.

The results of the current investigation also serve to extend the organ donor literature by providing empirical support for the assertion that a real behavior indicating consent to donate is related to an individual’s attitude toward donation, normative beliefs, and intentions. While previous research has supported this idea through the use of proxy measures of consent, it was important to validate these relationships when an actual behavior is used as an outcome. The assertion that researchers must move away from proxy measures of behavior is supported within the organ donor literature by Morgan et al. (2002), as well as in the persuasion literature by researchers applying the TRA (Eagly & Chaiken, 1993; Hale et al., 2002).

Prior research, as well as more contemporary research, in the area of donor consent has illuminated a number of characteristics of individuals who are likely to give their consent. Consenters tend to be more altruistic, of higher socioeconomic status, more internally directed, feel more guilt, and possess more accurate knowledge about donation (Horton & Horton, 1990;
Morgan & Miller, 2002; Sanner, 1994; Weber, 2003). In addition, the results of the current research, coupled with those of Morgan and colleagues (Morgan & Miller, 2002; Morgan et al., 2002) highlight the importance of individuals’ attitudes toward donation, perceptions of group norms, and intention to consent.

Future research must attempt to apply what we know of these individuals, and of persuasion theories, such as the TRA, in constructing messages intended to increase the number of people who give their consent. This sentiment was echoed by Morgan and Miller (2002) when they asserted that while donor profiles are helpful, information about the relationship of attitudes, values, knowledge, and actual behavior among adults is necessary if targeted communication campaigns promoting organ donation are to succeed. It would appear that this is the next logical step for researchers who are interested in donor consent. Social persuasion researchers must explore the characteristics of messages that serve to influence receivers’ attitudes, normative beliefs, and intentions.

Research conducted by Horton and Horton (1990, 1991), Morgan et al. (2002), and Sanner et al. (1995) focused on the connection between intention, attitudes, and knowledge about donation. Specifically, these authors found that belief in certain misconceptions about donation negatively affected both attitude toward donation and intention to consent to donation. They proposed that communication campaigns aiming to increase the number of organ donors must focus on educating the general public and clarifying the truth about these commonly held misconceptions about organ donation.

However, it is important to note that simply educating people about the facts of organ donation is not enough. The relationship between knowledge and actual behavioral consent, while significant, is small. According to a recent study that was conducted by Weber, Martin, COMM 401 Students, and Corrigan (2006), knowledge scores accounted for less than 6% of the variance in consent behaviors. Weber (2003) stated that

\[ \text{while it is obvious that knowledge does play a role in the consent process, campaign designers must be aware that merely providing people with information is not enough to significantly increase the number of people who consent to donation. There are a great number of other message characteristics that must be taken into account in order to create effective persuasive messages. (p. 14)} \]

As a result of this rationale, we did not feel compelled to include the knowledge variable in the present data collection.
A message characteristic that might prove interesting to explore is homophily. In other words, how similar do the receivers of a message think they are to the people who are portrayed in the message? A recent study conducted by Singh, Katz, Beauchamp, and Hannon (2002) found that donor consent rates increased when participants were provided with anonymous demographic information of possible organ recipients. Specifically, the authors provided an experimental group with information concerning three people in need of transplants. Participants in this experimental group were told that the three people in need all lived in the local area.

While these results led the authors to suggest that the inclusion of some demographic information in persuasive attempts at gaining consent might increase the number of consenters, this is not a practical solution. As Singh et al. (2002) themselves pointed out “many organ procurement agencies in this country do not provide recipient information of any kind because it is considered unethical and inherently coercive by donor families” (p. 476). In addition, the authors commented that they are not sure if it was the actual demographic data in itself that led to the increase in consent when they wrote “We do not know why the experimental group expressed more willingness to assist people in need of an organ transplant, only that they did” (p. 475).

It is possible that another process was at work in yielding these results. Looking at Singh et al.’s (2002) study design with an elaboration likelihood model (ELM) framework in mind might prove interesting. Since the potential recipients were described as being in the same locale as the participants, it could be argued that this information could serve as a similarity cue. This similarity cue could increase the persuasiveness of the message, either through central route processing by increasing personal relevance (e.g., “These people are from the same area as I am and share a similar background with me; therefore, it is something that affects my community, and I should care”) or peripheral route processing by serving as a simple heuristic cue (e.g., “I like to help people who are like me”; Petty & Cacioppo, 1981, 1986a, 1986b).

Either way, similarity has been shown to be effective in increasing the persuasiveness of a message (Cialdini, 1988; O’Keefe, 1990). Hovland, Janis, and Kelley (1953) wrote that similarity was one of the most powerful stimuli that determined the success of a persuasive appeal. Homophily, or similarity, is just one of many message characteristics that must be considered when designing messages intended to increase donor consent rates. Other message variables (e.g., knowledge, message type [i.e., statistical or narrative]) have been reviewed in the past (Kopfman et al., 1998; Morgan & Miller, 2002). Researchers must begin applying the knowledge garnered by previous investigations in designing messages that are effective in increasing organ donor consent rates.
References


Appendix

“We would like to thank you for coming today and taking part in our study. This is a project that we are completing for our Communication 160 class. We are currently involved in a study with the Center for Organ Recovery and Education (CORE) looking at who is most likely to sign an organ donor card. I want to make one thing clear from the outset; we are going to give each one of you organ donor cards that you may choose to sign or not sign. You do not have to sign the organ donor card to get your extra credit. You will receive your extra credit for just having shown up today.

“We are going to ask you to do the following; you will be given a short questionnaire that asks you a few questions about organ donation and about yourself. You will also receive a pamphlet from CORE. In the back of each pamphlet are two organ donor cards. If you would like to sign an organ donor card and be added to CORE’s registry of organ donors, then what you should do is tear out and sign both cards. Keep one card for yourself in your wallet, and the other you will place in the box by the door on your way out. Whether or not you sign an organ donor card, when you are done and are about to leave, you should take all of your materials and put them in the box by the door on your way out. This means that all questionnaires and signed or unsigned organ donor cards should be placed in the box when you leave. The reason for the box is so that nobody knows whether or not you signed the organ donor card.
“Once we are finished with the study, the box will be given to a research volunteer who is not associated with this class, the Communication Department, or this university. They will go through the box and separate the surveys and the organ donor cards. Once all of the signed organ donor cards are separated, the volunteer will call us and give us the code number for each of the signed cards, which you can see in the bottom left-hand corner of your pamphlet and questionnaire. The names of those who signed or didn’t sign will remain a secret to those of us in this class and anyone else at this university.

“Then the signed organ donor cards will be forwarded to CORE so that you can be added to their organ donor registry. The whole thing should take no more than 15 minutes. Does anyone have any questions?”

At this point, the experimenter present at the time would attempt to answer any questions concerning the participants’ extra credit or the procedures that arose. All experimenters were instructed to answer any questions concerning organ donation that the participants had with the response of “I can’t answer that right now because of the study, but if you would like to ask anything after you are done, I would be happy to provide you with any answers that I might have.” Once all of the questions were answered, the experimenter distributed the questionnaires and pamphlets.