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Interdisciplinary attitudes of mental health professionals-in-training.

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INTERDISCIPLINARY ATTITUDES OF MENTAL HEALTH

PROFESSIONALS-IN-TRAINING

by

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B.Sc., University of Toronto, 1982
M.A., University of Windsor, 1986

A Dissertation
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ABSTRACT

Tension exists among members of various mental health
professions, but factors that contribute to this tension are
unclear. Levinger and Snoek's (1971) theory of
interpersonal attraction and Deutsch's (1981) theory of
competition for limited resources provide a framework from
which to discuss hypotheses and results. The purposes of
the present study were to 1) assess amount and type of
interdisciplinary contact available to mental health
professionals-in-training, 2) assess interdisciplinary
attitudes of professionals-in-training, and 3) determine
factors contributing to favourable attitudes toward mental
health professionals. One hundred and sixty-one respondents
from clinical psychology, psychiatry, and social work
programmes in eight Ontario universities and one Michigan
university completed the Mental Health Professions
Questionnaire (MHPQ) and Personality Research Form-E.
Results indicated that professionals-in-training had more
frequent same-discipline interpersonal and task-related
contact than other-discipline contact, interdisciplinary
contact predicts positive task competence ratings, and
clinical psychology students rate their discipline as more
competent to perform most clinical tasks than other
professions. Results also indicated that there are few
interdisciplinary personality attribute differences and that

mental health professionals-in-training are more likely to make referrals to same-discipline than other-discipline members. Although further research is necessary, these results suggest that interdisciplinary contact during training of mental health professionals contributes to developing positive other-discipline attitudes.

DEDICATION

To my parents, Noreen and John,

to my brothers, Alan and Sandy,

to my husband, Steve.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

The efficient provision of mental health services within any community requires co-operation among mental health professionals with different training backgrounds. In many psychiatric hospitals and mental health centres, mental health professionals form a team in order to address the needs of patients. Thus, the quality of interdisciplinary attitudes and relationships among mental health professionals is important. Unfortunately, many mental health practitioners describe interdisciplinary relationships in unflattering terms. The relationship between clinical psychology and psychiatry has been variously described as reflecting "rivalry" (Cattell, 1983, p. 769), a "lack of unity and amity", "animosity" (Wallace & Rothstein, 1977, p. 618), "strain, disappointment and misunderstanding for both parties" (Berg, 1986, p. 52), and "difficulties in communication" (Kingsbury, 1987, p. 152). Similarly, the relationship between social work and medicine has been described as "strained" (Mizrahi & Abramson, 1985, p. 33).

Interdisciplinary tensions also exist at the political level. For example, Ontario psychologists recently approached the government for support in three areas: coverage under the Ontario Health Insurance Plan (OHIP)

(Ritchie, 1987); exemption under the proposed Goods and Services Tax (GST) (Wood & Allon, 1989); and licensure to use the term "diagnosis" (Wood, 1990a). Psychiatric services are covered under OHIP and are exempt from the GST; psychological services have not been awarded coverage under OHIP (Ritchie, 1987) but will be exempt now under the GST (Wood, 1990b). A final decision has not been made by the Minister of Health regarding permission for psychologists to diagnose mental disorders. It is known, however, that the psychiatric division of che Ontario Medical Association (OMA) and other professional associations, have voiced their objections to this proposed change (Wood, 1990a). Such political conflicts both reflect and contribute to interdisciplinary frictions.

Brodie (1983), the 111th President of the American Psychiatric Association, states in his presidential address that there is competition for treatment privileges and limited care resources among mental health providers. He notes that:

"If psychiatry is to be accorded effective reimbursement in competition with other providers of outpatient psychotherapy, it must educate the public, legislators, and employers as to the uniqueness of what psychiatrists do medically. The nation has been blitzed with the psychobabble of pop psychology: Everyone wants to be a counsellor to a client, and

there is simply not enough money in the health care

system to reimburse every pseudotherapist offering

mental health and happiness" (p. 966).

Concurrent with the competition between psychiatry and other

mental health professions, Snow (1981) notes that there

exist difficulties between psychologists and counsellors

regarding who should be licensed as psychologists. Surveys

of counsellors in the United States have shown that

counsellors are highly in favour of licensure (Swanson,

1981).

Various mental health professions claim majority

"ownership" over the right to treat mentally disordered

patients. If members of different mental health professions

cannot work well together, it is the patient who "pays the

price for an unresolved and politicized conflict between

professions" (Schectman & Harty, 1982, p. 464).

Causes of Interdisciplinary Friction Among

Mental Health Professions

Friction Between Psychologists and Psychiatrists

Previous authors have suggested possible reasons for

the observed friction between psychology and psychiatry.

First, some authors speculate about historical origins;

psychiatry has been in existence longer than psychology

(Berg, 1986; Hunt, 1974; Wallace & Rothstein, 1977), and

there has been a history of rivalry between these two

disciplines (Berg, 1986). When psychology joined psychiatry

in the mental health field, disputes arose over professional territory. For example, psychologists wanted to do psychotherapy and psychiatrists argued that they did not have sufficient skill and background (Berg, 1986).

Other writers have suggested that psychology and psychiatry view science differently. In the medical world, facts are immutable whereas in psychology, facts are refutable (Berg, 1986; Hunt, 1974; Kingsbury, 1987). Consequently, "many psychiatrists may act more certain of their information than they should be, whereas psychologists are more tentative about their information than they need be, which leads to a characteristic impatience in discussing issues with each other" (Kingsbury, 1987, p. 153).

Third, the nature of training experiences in the two disciplines differ considerably. Psychiatric training requires virtual immersion in a clinical context and is oriented toward practical decision-making whereas psychological training emphasizes supervision, reading, and thinking about a relatively small caseload (Kingsbury, 1987; McNamara, 1981; Stokes, Alexander, Lewis, Fischetti, & Rutledge, 1987). Neither psychologists nor psychiatrists are able to fully understand the value of the other's training and this may reinforce "stereotypes of the psychologist lost in thought and the psychiatrist lost in action" (Kingsbury, 1987, p. 155).

Fourth, the medical profession is highly structured according to a hierarchy of authority, whereas psychology is not (Kingsbury, 1987). In graduate school, psychology students generally progress at their own rate and professors and students often refer to each other on a first name basis. Medical school has a hierarchy of status and the rules are clear regarding how to address medical personnel both junior and senior to oneself. Tension occurs when psychologists fail to acknowledge this hierarchy (Kingsbury, 1987). For example, a psychologist may refer to a psychiatrist by his or her first name, thus breaching the hierarchy protocol. Furthermore, their medical training teaches psychiatrists to take control of the decision-making process (Berg, 1986; Stokes et al., 1987). Psychiatrists, however, unlike other specialized physicians, do not "own" all of their special skills. Psychologists and other mental health professionals are also trained in psychotherapy. Since there are overlapping skill areas among various professional groups, psychiatrists may have their opinions challenged more often than other physicians (Wallace & Rothstein, 1977) and may perceive these challenges as threats to their status within the hierarchy.

Fifth, as Wallace and Rothstein (1977) observe, there is little cross-disciplinary contact among mental health professionals-in-training. Disciplinary separation may

contribute to the formation of arbitrary boundaries and territoriality between disciplines.

Sixth, Berg (1986) and Miller and Swartz (1990) suggest that other physicians do not treat psychiatrists like "real" doctors; medical students view psychiatrists as personally flawed and unscientific. Berg (1986) hypothesized that the lack of status within the general medical profession might lead psychiatrists to project their resentment onto mental health professionals from other disciplines.

Finally, psychiatry may indirectly contribute to its' low status by adopting a psychosocial perspective that is alien to other medical specialists. Miller and Swartz (1990) suggest that by using nonmedical psychiatric terminology, psychiatrists collude with other medical professionals in minimizing the value of psychiatry. Medical personnel associate psychology with psychiatry and consequently, psychology is also devalued. Psychologists also contribute to the devaluation of their profession by accepting informal referrals and sharing psychological knowledge through interpersonal relationships rather than through formal teaching. This reduces the visibility of psychology and the respect of medical professionals (Miller & Swartz, 1990).

Friction Between Psychiatrists and Social Workers

A paper specifically addressing friction between psychiatry and social work could not be found. However,

Mizrahi and Abramson (1985) discuss potential causes of tension between physicians and social workers that may be applied to friction between psychiatry and social work. First, in relating to clients, physicians tend to encourage compliance with treatment prescriptions, whereas social workers encourage clients to be involved in their own treatment. Second, the nature of supervision and mentorship differs across the two disciplines; physicians are trained by residents with greater experience, whereas social workers are trained by practicing professionals. Third, role perceptions of multidisciplinary team members may differ; physicians take charge of a team and may make final decisions without regard for the input of other team members, whereas social workers accept their role as team members but expect their input to be valued. Four, physicians tend to be more interested in diagnosis and outcome while social workers tend to be more interested in the health process, which often extends beyond hospitalization.

Friction Between Psychologists and Social Workers

There has been little research on possible tensions between social workers and psychologists but at least two possible causes of friction can be suggested. First, it appears that there may be very little actual contact between students in these two disciplines. Consequently, attitudes formed about the other profession are not likely to be based

on actual experience and attitudes may reflect negative stereotypes. Second, tensions may arise from overlapping areas of training and perceived competence. Both psychologists and social workers may perceive that psychotherapy, for example, is within their domain and resent the other discipline for encroaching on it.

It is also possible that there has been little research on friction between psychology and social work because the tension is perceived to be minimal. Psychology and social work share a psychosocial perspective which may minimize the potential for interdisciplinary friction.

A Theoretical Framework for Research on Interdisciplinary
Attitudes Among Mental Health Professionals

Alcock, Carment, & Sadava (1988) note that the term attitude has traditionally been defined as a "relatively enduring organization of three components; cognitive, affective and behavioural" (p. 99). The cognitive component refers to "particular beliefs or ideas held about the object or situation"; the affective component refers to "associated emotions"; and the behavioural component refers to "associated action or actions" (Alcock et al., 1988, p. 99). Most research has focused on the cognitive component of attitudes.

Fishbein and Ajzen's (1975) review of the attitude formation literature indicates that there is a primacy effect in attitude formation; that is, attitudes that

develop first are the most robust and the most difficult to
change. Given such a primacy effect, one could argue that
attitudes developed during the formative years are the most
important (i.e., during training for mental health
professions).

Although there has been much speculation regarding
possible causes for interdisciplinary friction among mental
health professionals, the majority of empirical
investigations have been conducted without clear reference
to theory. Theories of interpersonal attraction and
competition for limited resources have clear relevance to
issues of interdisciplinary attitudes and may provide a more
coherent context for reviewing previous research and
generating research questions. Fishbein and Ajzen (1975)
warn against selecting variables for study "on the basis of
some vague intuitive notion" (p. 270), and argue that
although researching variables in isolation may be of
"substantive interest", the theoretical import of such
research is "negligible" (p. 271).

Theory of Interpersonal Attraction

A review of the interpersonal attraction literature
suggests that attraction is facilitated through: 1)
perceived similarity (Fishbein & Ajzen, 1975); 2)
geographical propinquity or proximity (Alcock et al., 1988);
3) self disclosure (Lindgren & Harvey, 1981); and 4) group
affiliation, particularly reference groups (Oskamp, 1977).

Levinger and Snoek (1972) have evolved a theory of interpersonal attraction that incorporates the first three elements listed above.

Levinger and Snoek (1972) describe four levels of increasing awareness and contact that lead to increased levels of interpersonal attraction. Although Levinger and Snoek (1972) specify interaction in "social roles", they also suggest that their theory may be applied to "varying phenomena of interpersonal attraction" (p. 17) and therefore it is applied to relationships that develop among mental health professionals.

The theory specifies that at the zero contact level (level 0), individual P does not have an awareness of or contact with individual O. At level 1 (unilateral or superficial awareness), P is aware of, and has formed evaluative attitudes toward O, but has not interacted directly with O. At this level of attraction, P's attitudes and feelings may depend on information or misinformation about O based on observation or on second-hand information. "P's attraction is attached to O's image rather than to any real experience of him as a person. Such images are rather easily manipulated..." (Levinger & Snoek, 1972, p. 16).

According to Levinger and Snoek (1972), at level 2 (surface contact), P and O have limited interactions and new information gleaned about O is derived from departures from socially established roles and norms. "P's initial

impression here may well be qualified by the extent to which
O manifests predictability, competence, cooperation, or
reciprocity of feeling" (p. 16). Levinger and Snoek (1972)
state that "P typically does not know O as a unique person
at this level of relationship because most of the
interaction between them is specified by their social roles.
Almost any alternative O who would play an equivalent role
would evoke similar feelings" (p. 16). At the final level
(mutuality), the partners share knowledge of themselves,
take responsibility for each other's welfare, and meet at
mutually agreed upon times. P and O are now interdependent
in that the views and attitudes of one affect the other.

Determinants of relationship development. Levinger and
Snoek (1972) suggest that progression from zero contact to a
unilateral level of awareness is determined by spatial
proximity, a lack of social distance, and an interest in
other people. Progress in the relationship from unilateral
awareness to surface contact requires time and opportunity,
the visible attractiveness of O, and the "perception of O's
probable coorientation or reciprocity" (p. 13). Progress
from surface contact to mutuality requires liking for O,
compatibility of attitudes, needs, and values, communication
of satisfaction in relationship, circumstances that allow P
and O to interact outside of their social roles, and the
formation of mutually satisfactory interactional norms.
Although Levinger and Snoek cite the necessary components

required to advance a relationship between P and O, they indicate that interpersonal contact is the most important factor: "the important cross-cutting dimension among varying phenomena of interpersonal attraction, then, is the depth of interpersonal involvement or "intersection" (p. 17).

Interdisciplinary Attitudes Among Mental Health Professionals

Extrapolating from Levinger and Snoek (1972), it could be argued that when individuals from a particular discipline have little or no personal contact with individuals from other disciplines, attitude formation will be based on misinformation or information from an outside source. As interpersonal contacts increase, individuals from different disciplines have a greater opportunity to know each other as people and not solely as people performing roles.

If mental health professionals-in-training do not have actual interpersonal contact with students and professionals in other mental health professions, then attitudes toward this group will be influenced largely by prevailing attitudes (e.g., attitudes of members of their own profession). As trainees have increased interpersonal contact with professionals and trainees in other mental health professions, they will tend to form attitudes based on their actual experience with these other groups, and will

develop more positive attitudes and more accurate perceptions.

The context of the interpersonal contact is also likely to affect interpersonal attraction and attitude formation. That is, if the nature of the contact is personal, positive attitudes about personality attributes of individuals from different disciplines may develop. Typically, surface contacts would be required in order to form an attitude about personality attributes. If the nature of the contact is professional, involving clinical tasks for example, more in-depth contact will be required (e.g., mutuality level) and positive attitudes about the professional skills of individuals from other disciplines may develop.

Insko and Wilson (1977) tested the hypothesis that social interaction leads to attraction. They asked groups of three respondents, who were unknown to each other prior to the experiment, to speak to each other in dyads for ten minutes while the third participant observed. The main dependent variable was liking for the other member of the dyad. The results of this study revealed that social interaction increased liking ratings for the other member of the dyad. Specifically, the respondents reported that they thought the other member had a "similar personality, similar beliefs and attitudes, has desirable characteristics you lack; likes you, is popular, and well liked, is interesting to talk to." (Insko & Wilson, 1977, p. 908).

Theory of Competition for Limited Resources

Brodie (1983) suggests that there exists competition for treatment privileges and limited mental health care resources. According to Deutsch's (1981) theory of competition for limited resources, two types of conflict are possible during an "economic crunch" or time of limited resources: constructive or destructive conflicts. Constructive conflicts are characterized by open, honest communication, a trusting, friendly attitude, willingness to be helpful, perception of similarities and commonalities among divergent groups, a willingness to work toward a common goal, and recognition and utilization of another's special talents to enhance mutual power. Destructive conflicts are characterized by poor communication, increased sensitivity to differences and "oppositeness" (e.g., "I am right, you are wrong"), suspicious and hostile attitudes, and the belief that conflict can only be solved by one group overpowering the other, thus enhancing its own power at the expense of the other group (Deutsch, 1981). Further, Deutsch suggests frequent and friendly intergroup interactions lead to cooperation and few and unfriendly intergroup interactions lead to competition.

The Significance of Deutsch's Theory of Conflict For Limited Resources

Deutsch's (1981) "crude law of social relations" states that "the characteristic processes and effects elicited by a

given type of social relationship tend also to elicit that type of social relationship" (p. 351). In other words, the nature of the relationship itself serves to perpetuate and to maintain the relationship. Canada is now confronting the effects of an economic recession; even during this country's most economically fertile years, mental health resources are finite and each profession tends to compete for a larger share. Therefore, given that there is always competition among the mental health professions for resources, the opportunity exists for either constructive or destructive conflicts. If interdisciplinary relationships have been strained and interdisciplinary communication has been poor, Deutsch's theory of social relations would predict a destructive conflict and one would expect that there would be limited interdisciplinary contact, increased sensitivity to interdisciplinary differences, and interdisciplinary tension. However, if interdisciplinary communication has been open, there has been a significant amount of friendly contact, and there is a willingness to work together, Deutsch's theory would predict a constructive conflict.

The Public Image of Mental Health Professionals

Much of the literature on attitudes toward the mental health professions has focused on public views of the various professions. Since mental health professionals (and those in training) are members of the public, their attitudes may also be affected by the prevailing public

attitudes. Thus, the literature on the public image of mental health professions will be briefly examined.

Wood, Jones, and Benjamin (1986) reviewed the literature on psychology's public image and found that global evaluations (e.g., value of the profession) were generally positive. However, when the respondents were asked questions requiring an affective response (e.g., Would you want your child to become a psychologist? or Are psychologists easy to interact with on an individual basis?), the results were negative (Wood et al., 1986).

More recent studies of psychology's public image (Schindler, Berren, Hannah, Beigel, & Santiago, 1987; Wood et al., 1986) suggest that psychologists are viewed somewhat more positively now than 45 years ago; psychologists are perceived as warm and tenderminded professionals who treat abnormal behaviour. Although the public's knowledge of psychology as a profession has improved, the differences (e.g., in education requirements and treatment strategies) between psychology and psychiatry are still unclear (Webb & Speer, 1986; Wood et al., 1986). Thus, public perceptions of psychologists are generally more favourable now than in the past but the general public does not have a clear understanding of what psychologists do.

The general public's perceptions of psychologists and psychiatrists are mixed. Schindler et al. (1987) report that psychologists' personal qualities were rated more

favourably than psychiatrists but that they were rated as similarly competent to treat problem patients. In contrast, Webb and Speer (1986) found that the general public perceives psychiatrists as having more positive personality attributes (e.g., understanding) and Trautt and Bloom (1982) found that psychiatrists were rated as being more competent than psychologists. However, if psychologists charge higher fees, they are perceived more favourably than if they charge lower fees (Trautt & Bloom, 1982). Although psychiatry's public image may be enhanced by comparisons with psychology, the public image of psychiatry is not altogether positive (Ingham, 1985; Lamontagne, 1990). Lamontagne suggests that psychiatry's image is damaged by (1) the public's belief that psychiatrists use medication as the sole treatment modality and (2) that the "results of psychiatric treatment are not obvious in the short term, while adverse effects of certain drugs very often are" (p. 693).

A paper specifically addressing social work's public image could not be found. However, Wasserman (1982) suggests that the social work image is somewhat negative also. "In the public mind social workers are identified as people who in some way take care of those who are incapable of dealing effectively with life's dilemmas. To be linked thusly as caretakers and helpers of stigmatized people carries with it the pain and degradation of stigma" (p. 179).

In summary, the public image of the mental health professions is less than optimal, although perceptions of psychology have improved over the past 45 years (Wood et al., 1986). It is clear that the general public needs to be educated with regard to educational requirements, areas of expertise, and the nature and value of services provided by each profession.

Attitudes of Undergraduate Psychology Students

The attitudes of psychology undergraduates have been the subject of a number of studies. These are considered separately because such respondents do not necessarily reflect the attitudes of either the general public or professionals-in-training. Unlike members of the general public, psychology undergraduates have all had at least some contact with psychologists. Neither do undergraduate students have the same professional goals nor the degree of contact with psychologists that is characteristic of professionals-in-training.

McGuire and Borowy (1979) administered instruments containing semantic differential attitude rating scales to 41 male and 44 female introductory psychology students. Respondents were asked to rate each of 11 mental health professions along 19 semantic differential rating scales (e.g., insincere-sincere, effective-ineffective). McGuire and Borowy (1979) rated the adjectives given to each role designation along a favourability dimension. They also

derived two clusters of adjectives representing valued and understandability factors. Nurse, physician, counselling and clinical psychologist, social worker, and psychiatrist were rated as the most valued professions. Students rated psychiatrist and psychoanalyst significantly lower than other professions on the understandability dimension. Respondents rated each profession higher on value items than on understandability items suggesting that students value certain professions without necessarily understanding the services they perform.

More recently, Alperin and Benedict (1985) surveyed students in undergraduate psychology classes to assess their perceptions of psychiatrists, psychologists, and social workers. Classes were randomly assigned to evaluate one of the three above mentioned professions. Psychologists were generally perceived as clever, studious, responsive, and appreciative. Psychiatrists were perceived as highly intelligent, intellectual but cold and reserved. Social workers were perceived as warm and approachable but not overly intelligent. Students also indicated that they would be more likely to seek help from a psychologist than a social worker or a psychiatrist.

In the Alperin and Benedict (1985) study, psychologists were more favourably perceived than both social workers and psychiatrists. The authors interpreted these results as confirmation that negative stereotypes exist for

psychiatrists and social workers. The sample used in their study, however, was not randomly selected from the general population. Therefore, all that can be concluded is that undergraduate psychology students have more favourable attitudes towards psychologists than they do toward psychiatrists or social workers.

Warner and Bradley (1991) assessed 120 (60 female, 60 male) introductory psychology students' perceptions of the personality characteristics, training, and education requirements typical of psychologists, psychiatrists, and counsellors. Respondents were given a 12-item multiple choice test to assess their knowledge of the training and education requirements specific to the three mental health professions. Respondents also read five clinical cases and rated their confidence in the ability of each profession to treat each case. Warner and Bradley's results show that counsellors were rated more highly on positive personality traits (i.e., helpful, caring, friendly, and a good listener) than were psychologists or psychiatrists. Psychiatrists were rated more highly on negative personality traits (e.g., cold, uninterested, introverted, odd and bossy, hostile, greedy, and egotistical) than either psychologists or counselors. Counselors were preferred over psychologists to treat three of five cases and psychiatrists were preferred over psychologists to treat one of five clinical cases (Warner & Bradley, 1991). Finally, the

Warner and Bradley respondents were, on average, correct only 50% of the time with respect to identifying differences in training and type of treatment-focus particular to the three professions.

In summary, among undergraduate psychology students, perceived personality characteristics of psychologists are generally positive, particularly in comparison to psychiatrists (Alperin & Benedict, 1985; Warner & Bradley, 1991). However, students do not perceive psychologists as more competent to treat mental disorders than psychiatrists or counsellors (Warner & Bradley, 1991). Social workers are perceived to be approachable, but are not the preferred professions for treatment (Alperin & Benedict, 1985), and psychiatrists are perceived to be cold and reserved but also among the most competent (Alperin & Benedict, 1985; Warner & Bradley, 1991).

Interdisciplinary Attitudes of Mental Health Professionals

Perceived personality attributes. Interdisciplinary attitudes of mental health professionals are an important focus of attention because these attitudes likely affect the nature of their interactions with other mental health professionals and are likely to be conveyed to professionals-in-training by instructors and supervisors.

Zander, Cohen, and Stotland (1957) interviewed psychologists, psychiatrists, and psychiatric social workers with regard to interdisciplinary role relations, power,

prestige, and influence. They found that frequent interdisciplinary contact was related to feelings of acceptance, friendship, comfort, and respect for members of other disciplines.

Folkins, Wieselberg, and Spensley (1981) and McGuire, Borowy, and Kolin (1986) assessed mental health professionals' perceptions of the personality attributes of fellow professionals. Folkins et al. surveyed 12 psychiatrists, 14 clinical psychologists, and 15 psychiatric social workers. They asked respondents in each group to rate the typical psychiatrist, clinical psychologist, psychiatric social worker, psychiatric nurse, and psychiatric technician using the Adjective Check List (ACL), an inventory that includes 300 personality adjectives. They found that in general, mental health professionals hold positive attitudes regarding the personality attributes of other mental health professionals. However, psychiatric social workers described psychiatrists as egotistical, opinionated, less likable, aggressive, assertive, ambitious, and dominant. In contrast, psychiatric social workers, registered nurses, and psychiatric technicians were given what the authors described as "good scout" ratings (e.g., dependable, capable, friendly) by all of the subjects.

McGuire et al. (1986) had 40 mental health workers and 10 hospital employees use semantic differential rating scales (e.g., insincere-sincere, weak-strong, effective-

ineffective) to rate 11 mental health profession categories:
clinical psychologist, counselling psychologist, marriage
counsellor, mental health attendant, nurse, physician,
psychiatric nurse, psychiatrist, psychoanalyst, school
psychologist, and social worker. McGuire et al. (1986)
found that, in general, respondents had positive attitudes
about the personality attributes of other mental health
professionals. However, they ranked psychoanalysts and
school psychologists the lowest of the 11 groups on the
total attitude scores. As familiarity with psychiatric
nurses increased, attitudes toward members of this group
became increasingly negative. The authors speculated that
these latter findings may reflect a lack of role clarity and
acceptance of the nursing role. However, one of the groups
consisted of only 10 subjects and the small sample size
limits generalizability to other samples of professionals.

Perceived competency. Blum and Redlich (1980)
distributed questionnaires to various groups of mental
health practitioners requesting information about their
perceptions of the role of psychiatrists. One hundred and
seventy-nine psychiatrists, 105 clinical psychologists, 105
psychiatric social workers, 106 psychiatric nurses, and 91
mental health workers returned completed questionnaires.
The response across the five disciplines was positive; there
was general agreement that psychiatrists are helpful across

many situations, particularly in the provision of supervision, training and psychotherapy.

Initially, the results from the Blum and Redlich (1980) study may appear to be inconsistent with Levinger and Snoek's (1972) theory of interpersonal attraction since the theory would not predict positive attitudes toward psychiatrists' abilities across professional domains (e.g., supervision and psychotherapy) without a significant amount of contact. The researchers, however, merely asked the respondents to indicate whether psychiatrists were helpful. The respondents were not asked about competency issues. "Helpful" is a rather vague term. It may be interpreted as "offering some help" as opposed to "offering a lot of help" or offering "no help". Respondents need only have a little contact with psychiatrists to recognize that psychiatrists are helpful. Perceptions about competence are more likely to be affected by contact or lack of contact because such judgements require greater familiarity with other mental health professions.

More recently, Arnett and his colleagues assessed the attitudes of psychiatrists toward psychology and psychologists in medical schools. Arnett and Leichner (1982b) distributed questionnaires to 16 psychiatric residency co-ordinators in order to study their attitudes on administrative, educational, and professional issues; 13 completed questionnaires were returned. The overall

response toward psychology was positive; that is, psychology was highly respected, and respondents agreed that psychologists should continue to have academic appointments in medical schools and should continue to be involved in residents' training (e.g., psychotherapy supervision). Also, consistent with Arnett and Leichner's findings that psychologists are valued and respected members of medical school departments, Carter (1991) found that the criteria used to promote both psychologists and psychiatrists within medical school departments was essentially the same.

Arnett and Martin (1981) gathered information from 67 psychologists working in medical school psychiatry departments about their work environment. The psychologists indicated that the "advantages were accruing faster than the disadvantages" (p. 241). They cited the unique teaching experience (e.g., working in multidisciplinary teaching contexts) and the opportunity for research as the major advantages. Their results also showed that, relative to the United States, Canadian medical schools are understaffed by psychologists which may reflect a lack of commitment to "integrating psychological theory, practice, and research into its program" (p. 243).

Based on the studies by Arnett and colleagues, there is some evidence to suggest that psychiatric residency co-ordinators are supportive of psychology's role in medical school psychiatric departments and that psychologists are

enjoying their relatively new role. There is also evidence, however, to suggest that the roles offered in psychiatric departments are limited in their scope; psychology's goals are defined by the medical profession, and psychologists are perceived by the medical profession as having lower professional status, and consequently have fewer privileges than physicians. Similarly, Arnett, Martin, Streiner, and Goodman (1987) found that 3% of Canadian psychologists in teaching hospitals and 2% in non-teaching hospitals had "full voting membership in medical staff associations" (p. 163). Moreover, Arnett and Leichner (1982b) discovered that the majority of residency co-ordinators did not want psychologists to hold senior administrative positions in psychiatry departments. The majority of co-ordinators also did not support an autonomous psychology department but rather, they supported psychology's subordinate position within a psychiatry department. Arnett and Martin's (1981) earlier results were consistent with these results; psychologists reported that they did not have full voting privileges on academic or institutional matters.

Schindler et al. (1981) obtained questionnaire responses related to the responsibilities, competencies, and ideal roles of psychologists and psychiatrists, from 40 psychologists, 47 psychiatrists, and 37 social workers and nurses. Respondents evaluated psychologists and psychiatrists on each of 11 activities (e.g., counselling,

diagnosis, intake screening). Psychologists' and psychiatrists' attitudes were widely disparate, with the greatest discrepancies relating to the competency issue. Psychiatrists believed that they were more competent than psychologists in eight of the eleven activities, that they were equally competent in psychotherapy and counseling, and that psychologists were more competent in psychological testing. In contrast, psychologists believed that they were more competent than psychiatrists in nine of eleven activities, that they were equally competent at testifying as an expert witness, and that psychiatrists were more competent at medication management. Schindler et al. (1981) suggested that these different points of view will contribute to "jealousy, rivalry, and territoriality between psychologists and psychiatrists" (p. 265).

Although this is the only study of its kind comparing the perceived task competency and responsibility of psychologists and psychiatrists, it appears that members within each profession believe that members of their own profession are more competent, and should assume greater responsibility to perform tasks also performed by members of other professions.

Similar findings have been reported with respect to interdisciplinary differences in the perceived qualifications of nurses and social workers. Kulys and Davis (1987) distributed questionnaires to 34 hospice

directors to assess their perceptions about the task
performance of nurses and social workers. Each hospice
director in turn distributed a questionnaire to one nurse,
one social worker, and one volunteer so that a total of 33
nurses, 29 social workers, and 30 volunteers participated.
Hospice directors rated social workers as better qualified
than nurses on one task (provision of financial information)
and rated the two groups as equally qualified on 12 of the
13 remaining tasks. However, when social workers and nurses
made the comparisons, over half of the social workers
perceived their same-discipline colleagues to be more
qualified than nurses in twelve of fourteen tasks, and two-
thirds of the nurses perceived their same-discipline
colleagues to be more qualified on nine of fourteen tasks.
These findings suggest that, as with psychology and
psychiatry, there is some overlap in the perceived roles of
social workers and nurses that may generate
interdisciplinary tensions.

Sheppard (1986) assessed the views of 188 primary
health care workers (118 general practitioners, 31 health
visitors, and 39 district nurses) toward social work.
Although social workers were generally held in high regard,
many of the respondents did not know what tasks social
workers perform. Further, many of the social work tasks
were perceived to be badly performed. Sheppard's (1986)
sample was unrepresentative as subjects were selected from

only one county in England. Additionally, he included "health visitors" in his sample but he did not describe the qualifications of these visitors. It is unclear if the term health visitor is an official title or whether it describes a heterogeneous group. Despite the flaws, Sheppard's results suggest that liking for professionals and belief in their competence are dimensions of interdisciplinary attitudes. This would be consistent with the hypothesis that personal contacts are more frequent than training contacts for mental health professionals-in-training. Therefore, it is possible for "liking" to develop relatively easily, whereas positive attitudes regarding competence may take more time and more frequent professional contact.

Interdisciplinary Attitudes of Mental Health Professionals-in-Training

The interdisciplinary attitudes of various mental health professionals-in-training is relevant with respect to their future professional functioning and interdisciplinary working relationships. Unfortunately, very little research has been conducted in this area.

In their study of psychiatric residents' attitudes toward psychologists, Arnett and Leichner (1982a) distributed questionnaires to Canadian psychiatry residents ($n = 201$) to assess attitudes toward the role of psychology. Overall, the psychiatric residents believed that: (1) the psychologist's role is important in a psychiatric

department; (2) it should not be limited to research; and (3) it should also include psychotherapy and supervision of psychiatric resident psychotherapy. Approximately half of the residents advocated a limited role for psychology; they believed that psychology is most helpful in, and should be limited to, behaviour therapy. The remaining sample of residents believed psychology's role should be broader. Results also showed that more recent medical school graduates tended to be more liberal and supportive of psychology (e.g., advocation of a broader role for psychology) whereas earlier graduates or graduates from Asia or Africa followed the medical model more closely and supported a more limited role for psychology (e.g., behaviour therapy only). The majority of residents also held attitudes that psychiatrists, rather than other mental health professionals, should be clinical team leaders, psychologists should not hold senior administrative positions, and psychologists' activities should be supervised by psychiatrists.

Interdisciplinary attitudes of clinical psychology and social work students have not been the subject of any published research reports. One possible reason for the lack of research in this area is that friction between clinical psychology and social work is perceived to be minimal relative to interdisciplinary frictions with psychiatry.

Rationale for the Present Study

Interdisciplinary attitudes of professionals-in-training are important because the attitudes adopted during training form the foundation for attitudes held later as practicing mental health professionals. If formative attitudes are unfavourable or based on inaccurate perceptions, they may impact on the quality of interdisciplinary interactions, and ultimately, patient care.

Levinger and Snoek's (1972) theory of interpersonal attraction and Deutsch's (1981) theory of competition for limited resources provide a context for understanding interdisciplinary attitudes of mental health professionals. According to the theory of interpersonal attraction, interpersonal contact is necessary for the formation of positive interpersonal attitudes (Levinger & Snoek, 1972). Wallace and Rothstein (1977) contend that professionals-in-training have very little interdisciplinary contact. They do not offer empirical support for their contention, however. Levinger and Snoek's theory would predict that interpersonal attitudes would be more positive for same-discipline than other-discipline professionals under these circumstances. Some support for this theory comes from Folkins et al. (1981) and McGuire et al. (1986) who found that personality attributions for mental health professionals were generally positive, although

psychologists and social workers made significantly more positive same-discipline than other-discipline ratings, and social workers perceived psychiatrists to be egotistical, opinionated, less likeable, aggressive, ambitious, and dominant. Deutsch's (1981) theory of conflict for limited resources suggests that competition among professionals for limited mental health resources may also contribute to role conflicts and less favourable interdisciplinary attitudes.

Sample. Clinical psychology, psychiatry, and social work disciplines were selected for this study because they are the core mental health professions and because members of these professions are typically represented on interdisciplinary teams and are involved in the major mental health care areas: Assessment, intervention, and placement. Undergraduate students working toward an Honours Degree in Psychology typically require four years to complete general interest and psychology courses, and the Honours Thesis. Clinical psychology students working toward an M.A. degree typically require two years in which to complete basic psychology and psychological assessment courses, an assessment practicum placement, and a Master's thesis. To complete a Ph.D., necessary for licensure in most jurisdictions, clinical psychology students typically require three to five years to complete courses in the theory and practice of psychotherapy with associated practicum placements, a 2000 hour internship, comprehensive

and specialty exams (e.g., oral and written exams in research design, psychopathology, and psychological assessment and psychotherapy issues and practice), and a doctoral dissertation.

An M.D. degree typically requires four years of various courses, hospital department rotations, and examinations. Prior to entering a Psychiatric residency programme, interns train intensively for one year in various medical departments, including Psychiatry. Psychiatric residency programmes typically involve three years of basic and selected interest courses in psychiatry, and much of the fourth year is spent in preparation for final written and oral exams. Throughout the four years of the Residency programme, residents are heavily involved in the treatment of psychiatric patients.

Social work students working toward a B.S.W. degree typically require four years to complete a blend of courses from the Arts and Sciences, professional courses comprising research, social welfare, social policy, social work practice/intervention, and 900 hours of field practice. An M.S.W. degree typically requires one year of further training after successful completion of the B.S.W. degree (two years are required for the M.S.W. degree if another degree at the Bachelor's level was obtained). During this year of training, further course work is completed in research, intervention, social policy, further field

practice is required and thesis work is optional. There are
several Ph.D. social work programmes in Canada, although
students from these programmes did not participate in this
study.

Purposes of the Study. An important initial purpose of
the study was to determine the actual amount and type of
contact professionals-in-training have with members of other
mental health disciplines. Interdisciplinary contacts have
not been the focus of research to-date, but Wallace &
Rothstein (1977) have suggested th·. interdisciplinary
contacts during training years are very limited.

The primary purpose of the present study was to survey
the interdisciplinary attitudes of mental health
professionals-in-training. Previous research suggests that
personality attributes of mental health professionals,
except psychiatrists, are perceived in a favourable light by
members of other disciplines (Folkins et al., 1981) and by
undergraduate students (Alperin & Benedict, 1985). Further,
research suggests that there is a tendency to perceive
members of one's own profession as most competent to perform
many clinical tasks (Kulys & Davis, 1987; Schindler et al.,
1981). Therefore, one purpose of the study was to determine
if this same pattern of attitudes and perceptions existed in
professionals-in-training. An additional purpose was to
test the Levinger and Snoek (1972) theory that frequent
interpersonal and task-oriented contact predict more

positive cross-discipline interpersonal and task-competency attitudes and perceptions.

Finally, it has been suggested that members of both the psychiatric and social work profession have particular personality attributes. Psychiatrists are perceived as cold, opinionated, less likable, and dominant (Folkins et al., 1981; Warner & Bradley, 1991) and social workers are perceived as warm, approachable, and as "good scouts" (Alperin & Benedict, 1985; Folkins et al., 1981). Therefore, (1) the extent to which mental health professionals-in-training were perceived to possess these stereotyped personality attributes was assessed and (2) personality attributes of professionals-in-training were assessed in order to determine if mental health professions do attract members with particular personality characteristics.

Preliminary Analyses

Wallace and Rothstein (1977) observe that there is little interdisciplinary contact during training of mental health professionals, but the amount and type of interdisciplinary contact that occurs during training has not been clearly documented. Preliminary analyses were conducted to assess the extent to which mental health professionals-in-training in the current sample have had contact with members of the three major mental health disciplines prior to and during training.

<u>Hypotheses</u>

   <u>Hypothesis One(a)</u>. Previous research suggests that the
personality attributes of mental health professionals tend
to be perceived in a positive light by members from other
disciplines (Folkins et al., 1981; McGuire et al., 1986).
Also, according to the theory of interpersonal attraction
(Levinger & Snoek, 1972), positive attitudes form when there
is contact between people. Since it is likely that
professionals-in-training have the greatest amount of
contact with same-discipline members, it is hypothesized
that personality attribute ratings (i.e., conscientiousness,
emotional stability, culture, leadership) for one's own
discipline would be the most positive.

   H1(a): Overall, mental health professionals-in-training
          will rate the personality attributes of all
          disciplines positively, but rate
          conscientiousness, emotional stability, culture,
          and leadership attributes of their own
          profession the most positively.

   <u>Hypothesis One(b)</u>. Although, mental health
professionals tend to rate members of other disciplines
positively, psychiatrists are more likely than members of
other professions to be perceived by members of other
professions and by undergraduate students as especially
cold, reserved, uninterested, hostile, and egotistical
(Alperin & Benedict, 1985; Folkins et al., 1981; Warner &

Bradley, 1991) whereas social workers are more likely to be perceived as especially warm, approachable, and friendly (Alperin & Benedict, 1985; Folkins et al., 1981). Therefore, it was expected that mental health professionals-in-training would rate psychiatrists as significantly less agreeable, and would rate social workers as significantly more extraverted and agreeable than other mental health disciplines.

> H1(b): Psychiatrists will be rated as significantly less agreeable and social workers will be rated as significantly more extraverted and agreeable than the other mental health disciplines.

Hypothesis Two. Folkins et al. (1981) found that psychiatric social workers described psychiatrists as egotistical, opinionated, less likable, aggressive, assertive, ambitious, and dominant. Also, some have suggested that psychiatrists have a "god complex" (Berg, 1986) and therefore enjoy having the final authority regarding a patient's treatment. If psychiatrists and psychiatric residents have different personality attributes than other mental health professionals, these differences should be revealed on a valid, self-rating personality measure, the Personality Research Form-E (PRF-E) for example. Specifically, psychiatric residents were expected to score higher (have more of the trait) on autonomy and

dominance, and to score lower (have less of the trait) on abasement and succorance.

Social workers have been described as "good scouts" (e.g., as more friendly, helpful, and cooperative than psychologists or psychiatrists) (Folkins et al., 1981) by psychiatrists and therefore it was expected that social work students should score higher (have more of the trait) on the PRF-E affiliation measure (e.g., warm, friendly).

All psychologists must have completed a doctoral dissertation in order to obtain a Ph.D. Due to the heavy research requirements necessary to obtain this degree, it was expected that clinical psychology students would score higher on the PRF-E Understanding measure (e.g., analytical, investigative, theoretical, probing) than psychiatric residents and social work students.

> H2: Mental health professionals-in-training in the disciplines of psychology, psychiatry, and social work will score differently on their self-ratings of Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding as measured on the PRF-E.

Hypotheses Three and Four. Research by Schindler et al. (1981) suggests that psychologists perceive members of their own profession to be more competent than psychiatrists at most clinical tasks. Similarly, psychiatrists tend to view members of their own profession as more competent than

psychologists at clinical tasks. This discipline bias was expected for competency ratings across professionals-in-training. Additionally, a discipline bias was expected for the reported likelihood of making treatment referrals; in other words, professionals-in-training were expected to report that they were more likely to make referrals to same-discipline members than to other-discipline members.

> H3: Mental health professionals-in-training will rate their own discipline as more competent to perform clinical tasks than members of other disciplines.

> H4: Mental health professionals will be more likely to make treatment referrals to their own discipline than to the other disciplines.

Hypothesis Five. The Levinger and Snoek's (1972) theory of attraction predicts that the greater amount of interpersonal contact one has, the more likely one is to develop positive attitudes toward that person. Therefore, greater degrees of personal contact should lead to more positive attitudes regarding personality attributes.

> H5: Personal contact with mental health professionals and professionals-in-training will predict higher personality attribute ratings for mental health professionals.

Hypothesis Six. Levinger and Snoek's (1972) theory of interpersonal attraction may be applied to perceptions of interdisciplinary clinical task competency in that task-

oriented contacts among the mental health disciplines contribute to positive perceptions of task competency. Deutsch (1981) states that competition for limited resources leads to either constructive or destructive conflict. Constructive conflict develops where there is contact, open communication, and recognition of another's talents (e.g., competency). However, destructive conflict develops from limited contact, poor communication, and suspicious and hostile attitudes toward the other group. Extrapolation based on the theories of Levinger and Snoek (1972) and Deutsch (1981) suggests greater interdisciplinary task-oriented contact should lead to more positive perceptions of clinical task competency.

> H6: Task-oriented contacts with mental health professionals and professionals-in-training will predict higher clinical task competency ratings.

Hypothesis Seven. The Levinger and Snoek (1972) and Deutsch (1981) theories may be applied to making referrals to members of other mental health professions. Willingness to work with, and hence task-oriented contact with members of other mental health professions, will lead to more positive attitudes, and consequently, a greater likelihood of making referrals to other mental health professions.

H7: Interdisciplinary task-oriented contacts with
mental health professionals and professionals
-in-training will predict a greater likelihood of
making interdisciplinary referrals.

CHAPTER II

METHOD

Respondents

The final sample included 123 women and 38 men who were
enrolled in mental health training programmes in clinical
psychology, psychiatry, or social work at one of nine
universities targeted in the current study. Respondents
were recruited from each year level of their current
training programme. See Table 1 for a breakdown of
respondents' year level by discipline. In total, 262
questionnaire packages were distributed and 161 were
completed for a return rate of 62%. Thirty-one
questionnaire packages were completed in the presence of the
researcher and returned directly to her with a return rate
of 97%, and 131 were completed and returned by mail, with a
return rate of 57%. Sampling and response rates, and
demographic characteristics for respondents in each
discipline are described in more detail below. See Table 2
for an overview of response rates by discipline and
university. All participants provided written, informed
consent and were treated in accordance with APA ethical
standards for research with human respondents (APA, 1990).

Clinical psychology students. Respondents in this
group were 68 students (52 women, 16 men) attending graduate
programmes in clinical psychology at six Ontario
universities; University of Ottawa, Queen's University,

Table 1

Respondents' Year Level and Programme

| | Year Level In Programme | | | | | | | |
Programme	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth
Clinical Psychology	15	18	9	9	8	3	5	1
Psychiatry	9	3	6	5	0	1	0	0
Social Work*	36	9	10	9	4	1	0	0

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*Includes students from B.S.W. and M.S.W. programmes

Table 2

Programme Enrollment and Number of Distributed, Returned, and Usable Questionnaires By

Discipline and University

School	Programme Enrollment	Questionnaires Distributed	Questionnaires Returned	Usable Returns
		Clinical Psychology		
Ottawa	90	21	16	16
Queen's	62	9	9	9
Waterloo	36	17	16	15
Western Ontario	33	11	8	8
Windsor	62	11	11	11
York	83	10	9	9
Total Psychology	366	79	69	68
		Psychiatry		
McMaster	30	30	8	3
Ottawa	7	7	7	3
Queen's	20	20	16	11
Western Ontario	18	18	10	4
Wayne State, MI	30	12	4	3
Total Psychiatry	105	87	45	24

Table 2 continued

School	Programme Enrollment	Questionnaires Distributed	Questionnaires Returned	Usable Returns

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<div align="center">Social Work</div>

School	Programme Enrollment	Questionnaires Distributed	Questionnaires Returned	Usable Returns
McMaster	65	28	19	18
Western Ontario	90	4	4	4
Wilfrid Laurier	65	35	28	24
Windsor	106	29	23	23
Total Social Work	326	96	74	69
Overall Total	797	262	188	161

Note: All social work respondents from Wilfrid Laurier were graduate students working toward

their M.S.W. degrees. Social work respondents from all of the other universities were

undergraduate students working toward their B.S.W. degrees.

Waterloo University, University of Western Ontario, University of Windsor, and York University. They ranged in age from 23 to 52 years, with mean age of 29.6 years (SD = 6.6). They reported a mean 7.8 years of postsecondary education (SD = 2.7).

The six clinical psychology programmes sampled in the current study represent all of the Ph.D. clinical psychology programmes in Ontario. The return rate for the clinical psychology programmes surveyed (returns/questionnaires distributed) was 92%; the completion rate (usable returns/questionnaires distributed) was 87%; and the sampling rate (usable returns/potential respondents) was 19%.

Psychiatry residents. Respondents in this group were 24 residents (11 women, 13 men) attending psychiatric residency programmes at four Ontario universities (McMaster University, University of Ottawa, Queen's University, University of Western Ontario), and Wayne State University in Detroit, Michigan. They ranged in age from 25 to 47 years, with mean age of 33.9 years (SD = 6.3). They reported a mean 10.3 years of postsecondary education (SD = 4.3).

The four Ontario psychiatric programmes sampled in the current study represent 4/5's of the university-based psychiatric programmes in this province. The University of Toronto Department of Psychiatry was approached but refused

access to their residents because they were reviewing their research ethics procedures and were not prepared to permit the introduction of new research at the time. The return rate for the psychiatric programmes surveyed (returns/questionnaires distributed) was 53%; the completion rate (usable returns/questionnaires distributed) was 28%; and the sampling rate (usable returns/potential respondents) was 23%.

Social work students. Respondents in this group were 69 students (60 women, 9 men) attending social work programmes at four Ontario universities; McMaster University, University of Western Ontario, University of Windsor, and Wilfrid Laurier University. They ranged in age from 19 to 49 years, with mean age of 27.2 years ($\underline{SD}$ = 8.3). They reported a mean 3.9 years of postsecondary education ($\underline{SD}$ = 2.1). The 24 respondents from Wilfrid Laurier University were all graduate students working toward a Master's degree in social work (M.S.W.) whereas the remaining 45 respondents in this group were undergraduate students enroled in Bachelor of Social Work (B.S.W.) programmes.

The four social work programs sampled in the current study represent 40% of the university-based social work programmes in Ontario. The remaining social work schools in the province (Carleton University, Lakehead University, Laurentian University, Ryerson Polytechnical Institute,

University of Toronto, and York University) were not
approached. The return rate for the social work programmes
surveyed (returns/questionnaires distributed) was 73%; the
completion rate (usable returns/questionnaires distributed)
was 72%; and the sampling rate (usable returns/potential
respondents) was 22%.

Measures

Each respondent completed two questionnaires; the
Mental Health Professions Questionnaire (MHPQ), developed
for this study, and the Personality Research Form-E
(Jackson, 1984).

Mental Health Professions Questionnaire (MHPQ). The
purpose of the MHPQ was to obtain relevant background
information and to measure students' attitudes toward
clinical psychology, psychiatry, and social work. The MHPQ
items were based on previous research and theories related
to interdisciplinary perceptions and attitudes.

Early drafts of the MHPQ were distributed to students
and psychology professors in social and clinical psychology
who were knowledgable about questionnaire construction
and/or had had experience in clinical settings and with
mental health professionals. Revisions to the questionnaire
(e.g., item wording, response format) were made on the basis
of the feedback and suggestions provided.

The MHPQ, as used in the current study (see Appendix
A), includes eight sections. Section A (Background

Information) contains questions about respondents'
demographic characteristics, current training programme,
their reasons for choosing a particular mental health
profession over others, and their work experience with
mental health professionals prior to entering their current
training programme. Section B (Current Programme of Study)
includes questions about the degree or professional
qualifications being sought, number of years in their
current programme, and the number of years required to
complete the current degree. Respondents also described
course-related clinical experiences (e.g., practica,
internships).

Section C (Interdisciplinary Interactions) includes
items related to the frequency of interaction with
practising members and students in each mental health
discipline (e.g., interactions in classes or seminars,
clinical supervision meetings, and research-related tasks).
Respondents rate the frequency of their interactions on a
seven-point Likert-type scale ranging from 1 (never or
rarely) to 7 (always or almost always).

Section D (Personal Contact) requests information about
family members who are mental health professionals, and
about friendships with practising professionals and students
in mental health professions. Respondents also rate their
willingness to refer someone with minor or severe mental
health problems to a psychologist, psychiatrist, or social

worker on seven-point Likert-type scales ranging from 1 (definitely would not) to 7 (definitely would).

Section E (Personality Characteristics) contains semantic differential rating scales representing five orthogonal personality dimensions that have been consistently derived in factor analytic studies of peer attributions; these are reviewed in some detail by Wiggins (1973). The five personality dimensions are: Extraversion (3 items, e.g., "outgoing-reserved"), conscientiousness (3 items, e.g., "dependable-undependable"), emotional stability (2 items, e.g., "calm-excitable"), culture (2 items, e.g., "sensitive-insensitive"), and agreeableness (3 items, e.g., "friendly-unfriendly") (Wiggins, 1973). These five dimensions have been repeatedly derived in studies of peer ratings of adults regardless of 1) type of respondent; 2) type of rater; 3) length of acquaintance; 4) kind of acquaintance (Wiggins, 1973). Two items reflecting leadership ability ("decisive-indecisive", "effective-ineffective") were also included. Respondents rate each of the three professional groups on 7-point scales. The poles for the semantic differential scales are reversed for half of the items to minimize random responding. For scoring purposes, the most positive personality ratings are scored 7 and the most negative personality ratings are scored 1. Thus, higher scores on extraversion, conscientiousness,

emotional stability, culture, agreeableness, and leadership ability all reflect more positive personality attributions.

In Section F (Task Performance), respondents judge how competent members of the three mental health professions are to perform 21 clinical tasks (e.g., personality assessment, crisis intervention). Responses are made using a seven-point Likert-type scale ranging from 1 (not at all competent) to 7 (very competent). Nineteen of the 21 clinical tasks included in the section are modifications of items included in questionnaires used by Schindler et al. (1981) and Kulys & Davis (1987).

Section G (Education/Qualifications) requests participants to rate confidence in their ability to describe the educational background, training, and professional qualifications necessary for mental health professionals to practice in the Province of Ontario. Responses were made using an 11-point scale that ranged from 0 (0% accuracy) to 10 (100% accuracy).

Section H (Overall Ratings) includes two true-false questions as a measure of social desirability. Respondents are asked to indicate their response to the following statements: "Personally, I have liked every mental health professional I have ever met" and "Personally, I have never had any doubts about the competence of any of the mental health professionals I have met". Based on available research, members of one profession do not tend to make

unequivocally positive ratings of professionals in other disciplines, particularly in the area of task competency (Kulys & Davis, 1987; Schindler et al., 1981). Therefore, endorsing the above statements would suggest that respondents were responding in a socially desirable manner.

Personality Research Form (PRF). The PRF was designed to measure "normal" functioning in a wide variety of situations (Jackson, 1984). The PRF (Form E) may be administered to a wide variety of groups including college, junior, and senior high school students, vocational rehabilitation and psychiatric patients (Jackson, 1984). There are 352 True/False items yielding scores on 22 scales: Abasement, Achievement, Affiliation, Aggression, Autonomy, Change, Cognitive Structure, Defendence, Dominance, Endurance, Exhibition, Harmavoidance, Impulsivity, Nurturance, Order, Play, Sentience, Social Recognition, Succorance, Understanding, Desirability, and Infrequency. The PRF-E requires 30 to 45 minutes to complete.

The scales of primary interest in this study were Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding. Defining trait adjectives for high scorers on the above scales follow: Abasement (obsequious, humble, subservient); Affiliation (warm, good-natured, friendly); Autonomy (independent, autonomous, individualistic); Dominance (leading, dominant, authoritative); Succorance

(ingratiating, needs protection, helpseeking); Understanding (inquiring, analytical, exploring) (Jackson, 1984).

The psychometric properties of the PRF are typically described as "excellent" (e.g., Hogan, 1989). According to Hogan (1989), the 22 scales have "high internal consistency, minimal overlap, good test-retest reliability, and minimal item ambiguity", and the PRF is "relatively free of acquiescence and social desirability response bias" (p. 632). Jackson (1984) found that the median correlation between content scales and the Desirability scale was .20; thus, social desirability accounts for only about 4% of the total variance in scores on the PRF content scales.

Although there is not extensive validity data on the PRF (Wiggins, 1989, p. 634), Jackson and his colleagues have conducted a number of studies to establish the concurrent and discriminant validity of the PRF scales. Jackson (1984) describes several investigations in which PRF self-ratings were found to correlate moderately to highly with peer ratings. Low correlations between PRF subscales and the anxiety and psychopathology subscales on the Jackson Personality Inventory, and moderate correlations between PRF-E subscales and similar subscales on the Bentler Interactive Psychological Inventory, have also been reported by Jackson and his colleagues (see Jackson, 1984).

Procedure

Questionnaire preparation. Six forms of the MHPQ were distributed; they differed only with respect to the order in which the three mental health professions were presented for rating. Presentation of the MHPQ and PRF-E in the questionnaire package was also counterbalanced and the questionnaires were randomly distributed.

A request form for a summary of the research results appeared on the final page of the MHPQ. Interested participants were requested to include their name and address on the form and to detach and return it separately to the researcher, in order to maintain anonymity.

Recruitment procedures. Ethical approval was obtained from the psychology Department's Ethics Review Committee at the University of Windsor and from each of the targeted psychology, psychiatry, or social work departments prior to recruitment.

Recruitment strategies varied, depending upon the level of co-operation obtained from the university departments. The psychology students were contacted using a variety of methods. At the Universities of Waterloo, Western Ontario, and York, letters inviting students to participate in the study in their own departments at prearranged times, were sent to the students via their psychology department mailboxes. At the Universities of Ottawa and Queen's, letters were sent to each of the departments inviting the

students to participate. Addresses were obtained from interested students and questionnaire packages were sent directly to them. University of Windsor students were approached individually by the researcher and these respondents completed the questionnaires at their own convenience.

All psychiatric departments permitted the same recruitment procedure. The Head Resident from each programme described the nature of the research to the psychiatric residents and the residents voted on whether or not they, as a group, would participate in the research. Questionnaire packages were sent to the head resident for distribution to the residents. The head residents supervised the return of the questionnaire packages to the researcher.

Data collection methods for the social work programmes also varied across schools. At McMaster, Wilfrid Laurier, and Windsor Universities, the researcher was given class time to briefly explain the purpose and method of the research. Students were then invited to attend out of class sessions in order to complete the questionnaires. Two letters were sent to the University of Western Ontario social work students. The response to the first letter inviting participation at pre-arranged times was poor. Therefore, a second letter was issued with an offer to mail questionnaire packages to a home or school address.

Questionnaire administration. The questionnaires were
distributed in one of two ways. Respondents available on
campus completed questionnaires individually or in groups,
with the researcher present. The procedures and the consent
form were explained briefly to each respondent, and
respondents were informed about how to request a summary of
the research results.

Questionnaires were mailed to participants if they were
unable to participate on campus. A cover letter outlined
the contents of the package (e.g., consent form, the two
questionnaires, and the request for research results form),
and provided instructions about returning all questionnaire
materials.

Questionnaire collection. Questionnaires completed by
respondents while in the presence of the researcher were
returned directly to the researcher. In all other
situations (e.g., questionnaires returned by psychiatric
residents), completed questionnaires were returned to the
researcher by mail.

Consent forms. Participants were requested to read
and to sign two copies of the consent form. (Please see
Appendix A for a copy of the consent form.) One copy was to
be signed and returned with the questionnaires and one was
to be retained by participants for their records.

CHAPTER III

RESULTS

Data Analysis: An Overview

The SYSTAT (Wilkinson, 1989) statistical package was used for all analyses. The alpha rate was set at $p < .05$ for all main effect analyses.

Data Management and Sequence of Analyses

Initially, descriptive statistics (i.e., means, standard deviations, frequencies) were examined to provide an overview of the general pattern in the data. Pearson x^2 were calculated to assess group differences on categorical variables (e.g., sex). One-way Analysis of Variance (ANOVA) procedures calculated between-group effects on continuous variables (e.g., age, years of postsecondary education) and the Tukey Honestly Significant Difference (HSD) multiple comparison procedure investigated significant between-group effects. According to a review of the literature by Jaccard, Becker, and Wood (1984), the Tukey HSD test is the preferred pairwise multiple comparison procedure to assess between-group differences because it is the most powerful procedure and because it generally maintains the experimentwise error rate at .05.

Simple Main Effect Comparisons of Mental Health Professions

Questionnaire Variables

Main effects for programme discipline (group) and the profession rated, and the interactions between these two factors were assessed for primary variables using repeated measures ANOVA's. The interaction effects were of greatest interest because of the hypothesized interactions between current programme of study and mental health profession. Keppel (1991) suggests selecting only one independent variable as a basis for simple effect analyses, since any additional simple effects "represent partially redundant information" (p. 238). For the purposes of this study, significant interactions were decomposed into a set of simple main effects for the within-subject variables. These simple effects were examined as planned comparisons using pairwise (dependent groups) t-tests with a familywise alpha level set at $p < .05$. The Modified Bonferroni correction (Keppel, 1991, p. 169) was used and the comparisonwise error rate was set at $p < .033$. The Modified Bonferroni correction was used because two orthogonal contrasts are generally allowed for each simple effect but hypothesis testing in the present study required three dependent t-tests. Due to the nature of the hypotheses, two-thirds of the probability values for pairwise t-tests were one-tailed; all significant two-tailed t-tests were indicated.

Tradition holds that the Multivariate Analysis of Variance (MANOVA) statistical technique should be calculated prior to performing multiple ANOVA's in order to control for Type I error. Huberty and Morris (1989), however, suggest that MANOVA does not control for this effect. They suggest that there are several valid uses for the MANOVA statistic; "to identify outcome variable system constructs, to select variable subsets, and to determine variable relative worth" (p. 302). Since this study did not include any of the above listed MANOVA research questions, this statistic was not employed. In the present research, conducting multiple ANOVA's did not increase the likelihood of making Type I errors since the dependent variables were highly correlated (See Appendix J); high correlations reduce the likelihood of capitalizing on Type I error because each ANOVA is essentially analyzing the variance of the same variable. Analyzing correlated variables increases the likelihood of reporting results based on redundant information (Huberty & Morris, 1989) and therefore, correlated variables were discussed as a whole, thereby reducing redundant information.

Regression Analyses

A series of standard multiple regression analyses were computed to determine the extent to which ratings of prior work involvement, interdisciplinary task-related contact (e.g., discussing clinical issues), and interpersonal

contact (e.g., amount of time spent socializing) were useful predictors of personality attributes, clinical task competency, and the reported likelihood of making referrals to mental health professionals.

Rationale for Combining B.S.W. and M.S.W. Social Work Data

The social work sample consisted of 69 students working toward either a B.S.W. or M.S.W. degree. The decision to combine M.S.W. and B.S.W. data was based on three considerations. First, between-group comparisons on all variables of interest indicated few significant B.S.W.-M.S.W. differences in experience or attitudes (see Appendix B). Second, obtaining either B.S.W. or M.S.W. degrees qualifies the recipient to work as a professional social worker so combining respondents from B.S.W. and M.S.W. programmes results in a more representative social work sample overall. Third, combining the B.S.W. and M.S.W. respondents resulted in a larger group size, decreased number of potential statistical comparisons, and improved statistical power.

Table 3 summarizes the preliminary analyses, hypotheses, analyses employed, and the source of the data.

MHPQ Part A: Background Information

An ANOVA revealed a significant group effect for age $[\underline{F}(2,157) = 7.2, \underline{p} < .01]$. Tukey HSD multiple comparisons revealed that psychiatry residents ($\underline{M}$ age = 33.9 yrs.) were significantly older than psychology ($\underline{M}$ age = 29.6 yrs.) and

Table 3

Summary Table of Preliminary Analyses and Hypotheses

Hypothesis	Source of Data	Statistical Analyses

Preliminary Analyses   MHPQ

Assess the amount and type of   Part A, Question 4   1) Two-factor ANOVA's, with one factor

    interdisciplinary task-related   Part C, Sections I   repeated

    and interpersonal contact.   and II   2) Within-subject pairwise t-tests

        Part D, Questions 1

        to 5

Hypothesis 1A   MHPQ

Personality attribute ratings would   Part E   1) Rank order procedure

    be more positive for   2) Two-factor ANOVA's, with one factor

    same-discipline members than for   repeated

    other-discipline members.   3) Within-subject pairwise t-

                                                 tests

Hypothesis 1B   MHPQ

Psychiatric residents were expected   Part E   1) Two-factor ANOVA's with one factor

    to obtain lower agreeableness   repeated

    ratings and social work   2) Within-subject pairwise t-tests

    students were expected to obtain

    higher agreeableness and

    extraversion ratings.

    Hypothesis Two   PRF-E

Group differences in self-   1) One-way ANOVA's

    reported ratings of abasement,   2) Tukey HSD pairwise comparisons

    affiliation, autonomy, dominance,

    succorance, and understanding.

                                                  (table continues)

Table 3 continues

Hypothesis	Source of Data	Statistical Analyses

Hypothesis Three   MHPQ

Mental health professionals-in-   Part F   1) Rank order procedure

training would rate their same-   2) Two-factor ANOVA's, with one factor

discipline members as more   repeated

competent on clinical tasks than   3) Within-subjects pairwise t-tests

other-discipline members.

....

Hypothesis Four   MHPQ

Mental health professionals-in-   Part D, Questions 6   1) Two-factor ANOVA's, with one factor

training would report greater   and 7   repeated

willingness to make referrals   2) Within-subjects pairwise t-tests

to same-discipline members than

to other-discipline members.

Hypothesis Five   MHPQ

Personal contact with other-   Part D, Questions   1) Series of standard multiple

discipline members would predict   2 to 5   regressions

more positive personality   Part E

attribute ratings for members of

each mental health profession.

Hypothesis Six   MHPQ

Task-oriented contacts with   Part A, Question 4   1) Series of standard multiple

other-discipline members would   Part C, Sections I   regressions

predict higher overall clinical   and II

task competency ratings.   Part F

(table continues)

Table 3 continues

....

Hypothesis	Source of Data	Statistical Analyses

....

Hypothesis Seven	MHPQ	
Interdisciplinary task-oriented	Part A, Question 4	1) Series of standard multiple
contacts would predict a	Part C, Sections I	regressions
greater likelihood of making	and II	
interdisciplinary referrals.	Part D, Questions 6	
	and 7	

....

social work students ($\underline{M}$ age = 27.2 yrs.), (all $\underline{p}$s < .05). There were no significant age differences between psychology students and respondents in social work.

Men were underrepresented among clinical psychology (16/68, 24%) and social work (9/69, 13%) students relative to psychiatric residents (13/24, 54%) [Pearson $\underline{X}^2(2)$ = 16.7, $\underline{p}$ < .001]. Thirty-six of the 68 clinical psychology students (53%), 11 of the 24 psychiatric residents (46%), and 38 of the 69 social work students (55%), indicated that they had had some prior work involvement in a mental health setting [Pearson $\underline{X}^2(2)$ < 1]. Table 4 shows group means and standard deviations for reported prior work involvement with each mental health profession.

A one-way ANOVA (current programme) yielded a significant programme effect for years of postsecondary education [$\underline{F}(2,156)$ = 60.4, $\underline{p}$ < .001]. Tukey HSD multiple comparisons revealed that psychiatric residents had significantly more years of postsecondary education ($\underline{M}$ = 10.3 yr., $\underline{SD}$ = 4.3) than either clinical psychology ($\underline{M}$ = 7.8 yr., $\underline{SD}$ = 2.6), ($\underline{p}$ < .001) or social work students ($\underline{M}$ = 3.9 yr., $\underline{SD}$ = 2.1), ($\underline{p}$ < .001). Clinical psychology students reported significantly more years of postsecondary education than social work students [$\underline{p}$ < .001]. Reported reasons for choosing a mental health discipline, and details of postsecondary degrees, diplomas, and certificates earned by respondents in each group are presented in Appendix C.

Table 4

Group Means (and Standard Deviations) for Amount of Prior Work Involvement with

Mental Health Professionals[a]

	Clinical Psychology Students (n = 33)	Psychiatry Residents (n = 10)	Social Work Students (n = 38)
Psychology	4.6 (2.1)	3.6 (2.3)	2.9 (1.7)
Psychiatry	2.6 (1.8)	5.2 (1.9)	2.2 (1.8)
Social Work	3.3 (1.8)	4.7 (1.8) ·	4.4 (1.8)

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[a] for respondents who reported prior work involvement in a mental health setting;

higher means reflect more involvement.

MHPQ Part B: Current Programme of Study/Training

Respondents described their current degree, enrollment date, and number of years of undergraduate and postgraduate training typically required to obtain the current degree. They also described clinical practica, internships, or residencies completed during their current programme of study. These data are presented in Appendix D.

MHPQ Part C: Interdisciplinary Interactions

Preliminary Analyses

The purpose of the preliminary analyses was to determine the extent of interdisciplinary task related and interpersonal contact. Respondents were expected to report more same-discipline than cross-discipline contact.

Prior Work with Mental Health Professionals. A two-factor ANOVA (between-group factor = current programme, within-subject factor = mental health profession) with one factor repeated (mental health profession) indicated no significant current programme factor for reported prior work involvement with mental health professionals [$F(2,58) = 2.3$, ns]. There were significant overall effects for the mental health profession factor [$F(2,116) = 5.4$, $p < .01$] and for the interaction (programme by profession) factor [$F(4,116) = 12.5$, $p < .001$].

Within-subject pairwise t-tests revealed that clinical psychology students had had significantly greater prior work involvement with psychologists than with psychiatrists

[t(67) = 3.8, p < .001] or social workers [t(67) = 2.3, p < .01]; the amount of prior involvement with social workers and psychiatrists did not differ significantly [t(67) = 1.9, ns]. Psychiatric residents reported significantly more prior work involvement with psychiatrists than with psychologists [t(23) = 2.9, p < .01]. There was no significant difference between psychiatric residents' reported prior involvement with psychiatrists or social workers [t(23) = 1.3, ns] but psychiatric residents had had significantly more prior work involvement with social workers than psychologists [t(23) = 2.5, p < .03, two-tailed]. Social work students reported significantly greater prior work involvement with social workers than with psychiatrists [t(68) = 6.5, p < .001] or psychologists [t(68) = 5.7, p < .001]; the reported amount of prior work involvement with psychiatrists or psychologists was similar [t(68) = 1.9, ns].

Interdisciplinary task-related interactions. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) was performed for the average amount of reported interaction with practicing mental health professionals (i.e., across

specific contexts).[1] There were significant overall current programme [$F(2,158) = 14.9$, $p < .001$], mental health profession [$F(2,316) = 26.5$, $p < .001$] and interaction effects (programme by profession) [$F(4,316) = 405.3$, $p < .001$]. Table 5 shows the group means and standard deviations for amount of reported interaction with practicing mental health professionals.

Within-subject pairwise t-tests revealed that clinical psychology students reported significantly greater interdisciplinary interaction with psychologists than with either psychiatrists [$t(67) = 26.5$, $p < .001$] or social workers [$t(67) = 26.6$, $p < .001$]; the amount of reported interaction with psychiatrists and social workers did not differ significantly [$t(67) < 1$]. Psychiatric residents had significantly greater interdisciplinary interaction with psychiatrists than with either psychologists [$t(23) = 12.0$, $p < .001$] or social workers [$t(23) = 13.9$, $p < .001$]; the amount of reported interaction with psychologists and social workers did not differ significantly [$t(23) = 1.7$, ns]. Social work students reported significantly greater interdisciplinary interaction with social workers than with either psychologists [$t(68) =

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[1]Descriptive statistics for specific context items related to interactions with practicing professionals and professionals-in-training are reported in Appendix E and F.

Table 5

Group Means (and Standard Deviations) for Amount of Interdisciplinary Interaction
with Practicing Mental Health Professionals[a]

	Clinical Psychology Students (n = 68)	Psychiatry Residents (n = 24)	Social Work Students (n = 69)
Psychology	6.7 (1.8)	2.8 (1.6)	1.6 (1.6)
Psychiatry	1.3 (1.0)	6.2 (1.0)	0.9 (1.0)
Social Work	1.3 (1.0)	2.4 (1.5)	5.0 (1.5)

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[a] higher means reflect more frequent interactions with mental health professionals.

13.4, p < .001] or psychiatrists [t(68) = 23.5, p < .001].
Social work students also reported that they had had more
frequent interactions with psychologists than with
psychiatrists [t(68) = 4.3, p < .001, two-tailed].

A two-factor ANOVA (current programme, mental health
profession) with one factor repeated (mental health
profession) was performed for the mean reported interaction
with mental health professionals-in-training (i.e., across
specific contexts). There was a significant overall effect
for the interaction (programme by profession) [F(4,314) =
344.1, p < .001], but no significant overall effects for
current programme [F(2,157) < 1] or mental health profession
[F(2,314) = 2.9, ns]. Table 6 presents group means and
standard deviations for amount of reported interdisciplinary
interaction with professionals-in-training.

Within-subject pairwise t-tests revealed that clinical
psychology students reported significantly more interaction
with psychology students than with either psychiatric
residents [t(67) = 23.9, p < .001] or social work students
[t(67) = 24.7, p < .001]; the reported frequency of
interactions with psychiatric residents and social work
students did not differ significantly [t(67) < 1].
Psychiatric residents reported significantly more
interaction with psychiatric residents than with either
psychology [t(23) = 14.1, p < .001] or social work students

Table 6

Group Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Professionals-in-Training[a]

	Clinical Psychology Students (n = 68)	Psychiatry Residents (n = 24)	Social Work Students (n = 69)
Psychology	5.4 (1.5)	1.2 (1.0)	1.5 (1.9)
Psychiatry	1.0 (0.7)	5.9 (1.3)	0.7 (0.9)
Social Work	1.0 (0.7)	1.1 (0.9)	5.2 (1.8)

[a] higher means reflect more frequent interactions with professionals-in-training in each mental health profession.

$[t(23) = 15.4, p < .001]$; the reported amount of interaction with psychology and social work students did not differ significantly $[t(23) = 1.3, ns]$. Social work students reported more interaction with social work students than with either psychology students $[t(67) = 13.3, p < .001]$ or psychiatric residents $[t(67) = 19.7, p < .001]$. However, they reported more interaction with psychology students than with psychiatric residents $[t(67) = 4.1, p < .001$, two-tailed].

MHPQ Part D: Personal Contact

The variables of interest for assessing interdisciplinary interpersonal contact were summary variables reflecting (a) the total number of family members who were social workers, psychiatrists, and psychologists, (b) the proportion of friends who were professionals or students in psychology, psychiatry, or social work, and (c) the amount of time spent socializing with professionals and mental health professionals-in-training.

Family Members in the Mental Health Professions. Respondents indicated if they had family members who were mental health professionals. Sixteen (24%) of the clinical psychology students, 7 (29%) of the psychiatric residents, and 16 (23%) of the social work students had family members who were mental health professionals. In some cases,

respondents had multiple family members in the mental health professions. Table 7 shows frequency data for mental health occupations of relatives, as reported by respondents in each discipline. Group means and standard deviations for the total number of family members who are mental health professionals are presented in Table 8. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated no significant effects for current programme ($F(2,158) < 1$], mental health profession [$F(2,316) = 1.5$, ns], or interaction (programme by profession) [$F(4,316) = 1.1$, ns] related to the number of family members in mental health professions.

Friends in the Mental Health Professions. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) was performed for summary variables reflecting the proportion of friends who were reported to be professionals or students of psychology, psychiatry, or social work. See Table 9 for descriptive statistics. There were significant overall effects for the mental health profession [$F(2,314) = 17.5$, $p < .001$] and interaction (programme by profession) [$F(4,314) = 148.0$, $p < .001$] factors, but the current programme factor was not significant [$F(2,157) < 1$].

Table 7

Mental Health Occupations of Family Members: Frequencies by Group[a]

	Clinical Psychology Students (n = 16)	Psychiatric Residents (n = 7)	Social Work Students (n = 16)
Social Worker	9	1	12
Psychiatrist	5	2	3
Psychologist	6	1	3
Nurse	1	3	2
Other	4	2	3

[a] for respondents who reported having family members in mental health occupations.

Table 8

Group Means (and Standard Deviations) for Number of Family Members who are Mental
Health Professionals

	Clinical Psychology Students (n = 68)	Psychiatry Residents (n = 24)	Social Work Students (n = 69)
Psychology	0.1 (0.3)	0.0 (0.2)	0.0 (0.3)
Psychiatry	0.1 (0.3)	0.1 (0.4)	0.0 (0.2)
Social Work	0.1 (0.4)	0.0 (0.2)	0.2 (0.6)

Table 9

Group Means (and Standard Deviations) for the Proportion of Friends who are Mental

Health Professionals or Professionals-in-Training

	Clinical Psychology Students ($n = 68$)	Psychiatry Residents ($n = 24$)	Social Work Students ($n = 68$)
Psychology	0.6 (0.2)	0.1 (0.2)	0.2 (0.2)
Psychiatry	0.0 (0.1)	0.5 (0.2)	0.0 (0.1)
Social Work	0.1 (0.2)	0.2 (0.2)	0.5 (0.2)

Within-subject pairwise t-tests revealed that clinical psychology students reported a greater proportion of friends who were in psychology than in psychiatry [t(67) = 18.4, p < .001] or social work [t(67) = 15.5, p < .001]. Psychology students also reported that they had a greater proportion of friends in social work than in psychiatry [t(67) = 5.8, p < .001, two-tailed]. Psychiatric residents reported a greater proportion of friends who were in psychiatry than in psychology [t(23) = 7.2, p < .001] or social work [t(23) = 5.5, p < .001]; the reported proportion of friends in psychology and social work disciplines did not differ [t(23) = 1.1, ns]. Social work students reported that a greater proportion of their friends were in social work than in psychology [t(67) = 9.6, p < .001] or psychiatry [t(67) = 16.3, p < .001]. Social work students also reported that they had a larger proportion of friends in psychology as compared to psychiatry [t(67) = 5.7, p < .001, two-tailed]. Appendix G shows group means and standard deviations for the responses to individual items in the personal contact section.

Amount of Time Spent Socializing with Members of the Mental Health Professions. Table 10 lists the group means and standard deviations for the time spent socializing with mental health professionals and professionals-in-training. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health

Table 10

Group Means (and Standard Deviations) for the Number of Hours/Week Spent Socializing

with Mental Health Professionals and Professionals-in-Training

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	Clinical Psychology Students (r = 68)	Psychiatry Residents (n = 24)	Social Work Students (n = 68)
Psychology	6.0 (4.9)	0.0 (0.1)	2.6 (5.5)
Psychiatry	0.0 (0.2)	3.1 (3.9)	0.0 (0.1)
Social Work	0.2 (0.5)	0.4 (0.8)	6.9 (11.1)

----

profession) indicated significant overall effects for the mental health profession [$F(2,238) = 5.6$, $p < .01$] and interaction (programme by profession) [$F(4,238) = 35.7$, $p < .001$] effects, but the current programme effect was not significant [$F(2,119) = 1.8$, ns].

Within-subject pairwise t-tests revealed that clinical psychology students reported spending significantly more time socializing with psychologists and psychology students than with individuals in psychiatry [$t(55) = 8.7$, $p < .001$] or social work [$t(55) = 8.5$, $p < .001$]; the reported amount of time spent socializing with individuals in psychiatry or social work was similar [$t(57) = 1.8$, ns]. Psychiatric residents reported spending significantly more time socializing with psychiatrists or psychiatric residents than with individuals in psychology [$t(17) = 3.4$, $p < .01$] or social work [$t(19) = 3.3$, $p < .01$]; the reported amount of time spent socializing with individuals in psychology or social work did not differ [$t(17) = 1.4$, ns]. Social work students reported spending significantly more time socializing with social workers or social work students than with individuals in psychology [$t(54) = 4.0$, $p < .001$] or psychiatry [$t(47) = 6.3$, $p < .001$]. However, they reported socializing significantly more with individuals in psychology than with individuals in psychiatry [$t(48) = 2.8$, $p < .01$, two-tailed].

<div align="center">Hypotheses</div>

Hypothesis One(a)

MHPQ Part E: Personality Characteristics. This hypothesis stated that all personality attribution ratings of mental health professionals would be positive, but that same-discipline conscientiousness, emotional stability, culture, and leadership ratings would be more positive than other-discipline ratings of these personality attributions. Agreeableness and extraversion personality attribution ratings were omitted from this part of the hypothesis because a different effect was anticipated; these personality attribute ratings were analyzed in Hypothesis One(b). Analyses were performed using mean ratings for items specific to each of four dimensions: conscientiousness, emotional stability, culture, and leadership. Descriptive statistics for attributions on each dimension by group and profession are presented in Tables 11, 12, and 13. Group means and standard deviations for personality attribute items are presented in Appendix H.

Mean personality attributions on all dimensions for all groups and professions rated were above the neutral score of 4.0, except that psychiatrists were rated more negatively on the agreeableness and culture dimensions by clinical psychology and social work students. A descriptive analysis indicated that clinical psychology students, psychiatric residents, and social work students perceived members of

Table 11

Means (and Standard Deviations) for Perceived Personality Attributes of Each Mental

Health Profession as Rated by Clinical Psychology Students (n = 68)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Conscientiousness	5.7 (0.7)	4.9 (1.0)	5.4 (0.9)
Extraversion	4.7 (0.9)	4.2 (0.8)	5.0 (0.9)
Emotional Stability	4.8 (0.9)	4.6 (0.9)	4.6 (1.0)
Culture	5.4 (1.0)	3.4 (1.2)	5.2 (1.1)
Agreeableness	4.9 (0.9)	3.2 (1.0)	5.3 (0.9)
Leadership Ability	4.8 (1.1)	5.1 (0.9)	4.7 (1.1)

[a] higher means reflect more positive personality attribute ratings.

Table 12

Means (and Standard Deviations) for Perceived Personality Attributes of Each Mental Health

Profession as Rated by Psychiatric Residents (n = 20)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Conscientiousness	5.7 (0.9)	5.7 (1.0)	5.7 (0.9)
Extraversion	4.7 (1.1)	4.8 (1.0)	5.1 (0.7)
Emotional Stability	5.1 (1.0)	5.0 (1.2)	4.6 (1.2)
Culture	4.8 (1.2)	5.0 (1.1)	4.9 (1.2)
Agreeableness	4.8 (1.0)	4.6 (1.0)	5.0 (1.1)
Leadership Ability	4.9 (1.1)	5.4 (1.1)	5.0 (1.1)

[a] higher means reflect more positive personality attribute ratings.

Table 13

Means (and Standard Deviations) for Perceived Personality Attributes of Each Mental Health Profession as Rated by Social Work Students (n = 67)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Conscientiousness	5.4 (0.9)	5.0 (1.1)	5.7 (0.9)
Extraversion	4.7 (0.8)	4.0 (0.9)	5.2 (1.0)
Emotional Stability	5.0 (1.0)	5.1 (1.1)	5.1 (1.1)
Culture	4.8 (1.2)	3.7 (1.3)	5.8 (1.0)
Agreeableness	4.8 (0.8)	3.7 (1.2)	5.6 (0.8)
Leadership Ability	4.8 (1.1)	4.8 (1.1)	4.6 (1.2)

[a] higher means reflect more positive personality attribute ratings.

their own disciplines most positively on eight, seven, and twelve, respectively, of the fifteen individual personality attributes.

Conscientiousness. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated significant overall effects on the conscientiousness dimension for the mental health profession factor [$F(2,300) = 16.6$, $p < .001$] and for the interaction (current programme by mental health profession) [$F(4,300) = 7.1$, $p < .001$], but the current programme factor was not significant [$F(2,150) = 1.6$, ns]. Within-subject pairwise t-tests revealed that clinical psychology students perceived psychologists to be more conscientious than either psychiatrists [$t(65) = 7.6$, $p < .001$] or social workers [$t(67) = 3.2$, $p < .01$], and that social workers were perceived as more conscientious than psychiatrists [$t(65) = 4.6$, $p < .001$, two-tailed]. Psychiatric residents perceived psychiatrists, psychologists, and social workers as similarly conscientious (all ts, ns). Social work students perceived social workers to be more conscientious than either psychologists [$t(66) = 3.1$, $p < .01$] or psychiatrists [$t(66) = 4.8$, $p < .001$], and perceived psychologists to be more conscientious than psychiatrists [$t(66) = 3.8$, $p < .001$, two-tailed].

Emotional Stability. A two-factor ANOVA (current programme, mental health profession) with one factor

repeated (mental health profession) indicated a significant overall effect on the emotional stability dimension for the current programme factor [$F(2,150) = 4.2$, $p < .02$], but no significant overall effects for the mental health profession factor [$F(2,300) = 2.3$, ns] or for the interaction (programme by profession) [$F(4,300) = 1.6$, ns]. No t-tests were computed because the interaction was not significant.

Culture. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated significant overall effects on the culture dimension for the mental health profession factor [$F(2,300) = 60.1$, $p < .001$] and the interaction (programme by profession) [$F(4,300) = 19.5$, $p < .001$], but the current programme factor was not significant [$F(2,150) < 1$]. Within-subject pairwise dependent t-tests revealed that clinical psychology students perceived both psychologists [$t(65) = 11.8$, $p < .001$] and social workers [$t(65) = 10.3$, $p < .001$] to be more cultured than psychiatrists; they perceived psychologists to be more cultured than social workers [$t(67) = 1.9$, $p < .033$, two-tailed]. Psychiatric residents attributed similar levels of culture to mental health professionals across the three disciplines, (all ts, ns). Social work students rated social workers as more cultured than either psychologists [$t(66) = 6.9$, $p < .001$] or psychiatrists [$t(66) = 11.4$, $p < .001$] but perceived

psychologists as more cultured than psychiatrists [t(66) = 5.9, p < .001, two-tailed].

Leadership. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated a significant overall effect on the leadership dimension for the mental health profession factor [F(2,300) = 7.5, p < .01], but neither the current programme factor [F(2,150) = 1.4, ns], nor the interaction (programme by profession) [F(4,300) = 1.8, ns] were significant. No t-tests were performed because the interaction was not significant.

Hypothesis One(b)

Psychiatrists were expected to be perceived as less agreeable than other mental health disciplines whereas social workers were expected to be perceived as more agreeable and more extraverted than members of the other mental health disciplines. Descriptive analyses based on items from the agreeableness and extraversion dimensions showed that psychiatrists were perceived to be the most unfriendly and arrogant by all three groups of respondents. Social workers were perceived to be most outgoing, open, friendly, and unassuming, by all three groups of respondents.

Agreeableness. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) on the agreeableness dimension indicated

significant overall effects for the mental health profession factor $[F(2,300) = 107.1, p < .001]$ and for the interaction (programme by profession) $[F(4,300) = 14.0, p < .001]$, but the current programme factor was not significant $[F(2,150) = 2.1, ns]$. Within-subject pairwise t-tests revealed that clinical psychology students rated social workers as more agreeable than psychologists $[t(67) = 3.7, p < .001]$ and psychiatrists $[t(65) = 13.6, p < .001]$. Clinical psychology students rated psychologists as more agreeable than psychiatrists $[t(65) = 12.2, p < .001]$. Psychiatric residents perceived social workers as more agreeable than psychiatrists $[t(19) = 2.1, p < .03]$, but perceived psychologists and psychiatrists, and social workers and psychologists to be similarly agreeable (all ts, ns). Social work students rated social workers as more agreeable than both psychologists $[t(66) = 9.7, p < .001]$ and psychiatrists $[t(66) = 11.3, p < .001]$, and rated psychologists as more agreeable than psychiatrists $[t(66) = 7.2, p < .001]$.

Extraversion. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated significant overall effects on the extraversion dimension for the mental health profession factor $[F(2,300) = 31.0, p < .001]$ and for the interaction (programme by profession) $[F(4,300) = 4.4, p < .01]$, but the effect for current programme was not significant $[F(2,150) <$

1]. Within-subject pairwise dependent t-tests revealed that clinical psychology students perceived psychologists to be more extraverted than psychiatrists [$t(65) = 3.5$, $p < .001$, two-tailed]. However, social workers were rated as more extraverted than both psychologists [$t(67) = 2.8$, $p < .01$] and psychiatrists [$t(65) = 5.5$, $p < .001$] by clinical psychology students. Psychiatric residents perceived psychiatrists, psychologists, and social workers to be similarly extraverted, (all ts, ns). Social work students rated social workers as more extraverted than both psychologists [$t(66) = 5.7$, $p < .001$] and psychiatrists [$t(66) = 7.5$, $p < .001$] but perceived psychologists as more extraverted than psychiatrists [$t(66) = 5.8$, $p < .001$, two-tailed].

The Personality Research Form-E

Hypothesis Two

The second hypothesis stated that there would be group differences in self-reported Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding. Table 14 lists the group means and standard deviations for the personality attribute self-ratings on the PRF-E.

One-way ANOVA's were first computed for the test-taking attitudes and validity measures (i.e., Infrequency and Desirability). No significant current programme differences in test taking behaviour were observed (all ts, ns); thus,

Table 14

Group Means (and Standard Deviations) for Relevant PRF-E Scales

	Clinical Psychology Students ($\underline{n}$ = 68)	Psychiatry Residents ($\underline{n}$ = 24)	Social Work Students ($\underline{n}$ = 69)
Abasement	5.7 (2.2)	6.5 (3.0)	6.6 (2.9)
Affiliation	9.7 (3.8)	7.8 (3.5)	9.8 (3.9)
Autonomy	6.9 (3.0)	8.0 (2.9)	6.5 (3.3)
Dominance	8.0 (3.3)	9.2 (4.0)	8.3 (3.8)
Succorance	8.0 (3.4)	7.0 (3.4)	8.0 (3.9)
Understanding	11.7 (2.4)	12.5 (2.5)	9.1 (3.0)

[a] higher means reflect a greater likelihood of having the personality attribute.

the PRF scales appear to be valid indicators of participants' self-perceptions.

One-way ANOVA'S (current programme) were computed for Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding. There were no significant personality self-rating differences among the three groups of respondents (all Fs, ns), with the exception of Understanding [F(2,152) = 21.5, p < .001].[2] Tukey HSD pairwise comparisons indicated that both clinical psychology students (p < .001) and psychiatric residents (p < .001) had significantly higher scores on the Understanding scale as compared to social work students. Understanding scale scores of clinical psychology students and psychiatric residents did not differ significantly (p = ns).

Hypothesis Three

MHPQ Part F: Task Performance. The third hypothesis stated that mental health professionals-in-training would rate their own discipline as more competent to perform clinical tasks than members of other disciplines. Statistical analyses were conducted using ratings on 21 individual clinical tasks as the dependent variables.

Composite Task Competency Ratings. Table 15 lists the group means and standard deviations for overall mean

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[2]Age, sex, and number of years of postsecondary education effects were controlled for prior to running the one-way ANOVA for Understanding and age was discovered to be related to Understanding.

Table 15

Group Means (and Standard Deviations) for Overall Competency Ratings for Each of the

Mental Health Professions[a]

	Clinical Psychology Students (n = 68)	Psychiatry Residents (n = 24)	Social Work Students (n = 67)
Psychology	5.7 (0.6)	5.2 (0.7)	5.4 (0.7)
Psychiatry	4.2 (0.9)	5.5 (0.6)	5.1 (1.0)
Social Work	4.0 (0.9)	4.4 (0.8)	5.2 (0.6)

[a] higher means reflect higher competency ratings.

competency ratings for each profession. A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated significant overall effects for the current programme [$F(2,151) = 18.9$, $p < .001$] and mental health profession factors [$F(2,302) = 56.8$, $p < .001$], and for the interaction (programme by profession) [$F(4,302) = 40.7$, $p < .001$].

Within-subject pairwise t-tests revealed that, overall, clinical psychology students rated psychologists as significantly more competent than psychiatrists [$t(66) = 15.3$, $p < .001$] and social workers [$t(67) = 14.8$, $p < .001$]; their competence ratings for psychiatrists and social workers did not differ significantly [$t(66) = 1.5$, ns]. Overall, psychiatric residents perceived psychiatrists as more competent than psychologists [$t(19) = 2.1$, $p < .03$] and social workers [$t(19) = 6.3$, $p < .001$]; psychologists were perceived as more competent than social workers [$t(19) = 6.4$, $p < .001$, two-tailed]. Social work students perceived social workers to be about equally as competent overall as psychiatrists [$t(66) = 1.5$, ns], but psychologists were perceived as more competent than psychiatrists [$t(66) = 2.8$, $p < .01$, two-tailed] and social workers [$t(66) = 2.0$, $p < .03$].

Competency Ratings on Individual Clinical Tasks. Appendix I contains tables of group means and standard deviations for each of the 21 clinical tasks. A descriptive

analysis of mean group ratings on 21 individual clinical task items indicated that clinical psychology students, psychiatric residents, and social work students ranked members of their own disciplines as the most competent on 19, 13, and 11 of the 21 individual tasks, respectively. Across the three groups of respondents psychologists were ranked most competent at intelligence and personality testing, intellectual and personality assessment, group psychotherapy, and conducting research, whereas psychiatrists were ranked most competent at making diagnoses and medication management. All three groups of respondents ranked social workers least competent at intelligence and personality testing, intellectual assessment, making diagnoses, and medication management.

Two-factor ANOVA's (current programme, mental health profession) with one factor repeated (mental health profession) were subsequently performed for each of the 21 clinical tasks. There was no significant overall current programme effect for the following variables; intake screening, evaluation of psychosocial functioning, group psychotherapy, crisis intervention, and supervising/training individuals in the same profession, but overall current programme effects were significant for the remaining 16 clinical tasks. Table 16 lists the current programme effects for the task competency items.

Table 16

Current Programme Effects for Individual Task Competency Items

Task	df	F	p<
Intake Screening	2,152	0.2	ns
Evaluation of Psychosocial Functioning	2,152	0.6	ns
Administering Intelligence Tests	2,151	47.2	.001
Administering Personality Tests	2,151	41.4	.001
Intellectual Assessment	2,151	45.5	.001
Personality Assessment	2,151	28.1	.001
Making Diagnoses	2,152	4.4	.05
Individual Counselling	2,151	4.6	.05
Individual Psychotherapy	2,151	4.6	.05
Group Counselling	2,151	3.9	.05
Group Psychotherapy	2,151	1.7	ns
Family Counselling	2,151	5.2	.01
Family Psychotherapy	2,151	3.7	.05
Crisis Intervention	2,151	0.2	ns
Medication Management	2,151	9.8	.001
Testifying as an Expert Witness in Court	2,151	15.6	.001
Leading an Interdisciplinary Mental Health Team	2,152	3.9	.05
Making Staffing Decisions	2,151	5.4	.01
Supervision/training Individuals in Same Mental Health Profession	2,151	0.9	ns
Supervision/training of Other Mental Health Professionals	2,151	3.8	.05
Conducting Research	2,152	52.6	.001

The overall mental health profession effects were not significant for intake screening, crisis intervention, making staffing decisions, or supervising/training individuals in the same profession but were significant for the remaining 17 clinical tasks. Table 17 lists the mental health profession effects for competency task items. The interaction (programme by profession) for supervising/training individuals in the same profession was not significant but the interactions were significant for the remaining 20 clinical tasks. Table 18 lists the programme by profession effects for the competency task items.

Clinical Task Categories. Fourteen of the 21 clinical tasks formed natural task categories and were highly intercorrelated: assessment (i.e., intake screening, evaluation of psychosocial functioning, administration of intelligence and personality tests, intellectual and personality assessments, making diagnoses) and treatment categories (individual, group, and family counselling, individual, group, and family psychotherapy). Assessment and treatment task results were discussed as a whole since these variables are highly correlated and present redundant information. The remaining seven variables represent miscellaneous clinical tasks and therefore were discussed separately. Appendix J shows assessment and treatment category correlations.

Table 17

Mental Health Profession Effects for Individual Task Competency Items

Task	df	F	p<
Intake Screening	2,304	0.3	ns
Evaluation of Psychosocial Functioning	2,304	16.3	.001
Administering Intelligence Tests	2,302	363.6	.001
Administering Personality Tests	2,302	265.1	.001
Intellectual Assessment	2,302	206.5	.001
Personality Assessment	2,302	92.0	.001
Making Diagnoses	2,304	97.0	.001
Individual Counselling	2,302	11.8	.001
Individual Psychotherapy	2,302	22.4	.001
Group Counselling	2,302	36.8	.001
Group Psychotherapy	2,302	10.1	.001
Family Counselling	2,302	47.0	.001
Family Psychotherapy	2,302	6.3	.01
Crisis Intervention	2,302	2.1	ns
Medication Management	2,302	524.0	.001
Testifying as an Expert Witness in Court	2,302	21.1	.001
Leading an Interdisciplinary Mental Health Team	2,304	10.2	.001
Making Staffing Decisions	2,302	1.7	ns
Supervision/training Individuals in Same Mental Health Profession	2,302	2.9	ns
Supervision/training of Other Mental Health Professionals	2,302	3.7	.05
Conducting Research	2,304	86.3	.001

Table 18

Programme By Profession Effects for Individual Task Competency Items

Task	df	F	p<
Intake Screening	4,304	11.8	.001
Evaluation of Psychosocial Functioning	4,304	8.0	.001
Administering Intelligence Tests	4,302	47.7	.001
Administering Personality Tests	4,302	35.0	.001
Intellectual Assessment	4,302	43.4	.001
Personality Assessment	4,302	39.0	.001
Making Diagnoses	4,304	25.4	.001
Individual Counselling	4,302	14.8	.001
Individual Psychotherapy	4,302	10.0	.001
Group Counselling	4,302	13.7	.001
Group Psychotherapy	4,302	6.7	.001
Family Counselling	4,302	14.7	.001
Family Psychotherapy	4,302	11.0	.001
Crisis Intervention	4,302	23.3	.001
Medication Management	4,302	9.8	.001
Testifying as an Expert Witness in Court	4,302	15.1	.001
Leading an Interdisciplinary Mental Health Team	4,304	13.5	.001
Making Staffing Decisions	4,302	8.9	.001
Supervision/training Individuals in Same Mental Health Profession	4,302	1.7	ns
Supervision/training of Other Mental Health Professionals	4,302	5.9	.001
Conducting Research	4,304	39.3	.001

Individual task ratings by clinical psychology students. Clinical psychology students rated psychologists as more competent than both psychiatrists and social workers to perform six of seven assessment tasks (i.e., intake screening, evaluation of psychosocial functioning, administration of intelligence and personality tests, intellectual and personality assessment), six of seven treatment tasks (i.e., individual and group counselling, individual, group, and family psychotherapy, crisis intervention), and six of seven miscellaneous tasks (i.e., testifying as an expert witness in court, leading an interdisciplinary mental health team, making staffing decisions, supervising/training individuals in the same and other mental health professions, conducting research). Appendix K lists all pairwise comparisons. They rated psychologists as more competent than social workers but not psychiatrists to perform one assessment task (i.e., to make diagnoses) and to manage medication, but rated psychiatrists as more competent than psychologists to manage medication. Clinical psychology students also rated psychologists as more competent than psychiatrists but not social workers to perform one treatment task (i.e., family counselling).

Individual task ratings by psychiatric residents. Psychiatric residents rated psychiatrists as more competent than both psychologists and social workers to perform one assessment task (i.e., making diagnoses), two treatment

tasks (i.e., individual psychotherapy, crisis intervention), and four miscellaneous tasks (i.e., medication management, testifying as an expert witness in court, leading an interdisciplinary mental health team, making staffing decisions). They rated psychologists, psychiatrists, and social workers as similarly competent to perform one assessment task (i.e., evaluation of psychosocial functioning), three treatment tasks (i.e., group and family counselling, group psychotherapy) and one miscellaneous task (i.e., supervising/training individuals in other mental health professions). Psychiatric residents rated psychologists as more competent than psychiatrists and social workers to perform three assessment tasks (i.e., administering intelligence and personality tests, performing intellectual assessments), and one miscellaneous task (i.e., conducting research). They rated psychiatrists as more competent than psychologists, but not social workers, to perform one assessment task (i.e., intake screening) and one treatment task (i.e., family psychotherapy). They also rated psychologists as more competent than social workers, but not psychiatrists, to perform one assessment task (i.e., personality assessment). Finally, psychiatric residents rated psychiatrists as more competent than social workers to perform one treatment task (i.e., individual counselling).

Individual task ratings by social work students. Social work students rated social workers as significantly more

competent than psychologists and psychiatrists to perform two assessment tasks (i.e., intake screening, evaluation of psychosocial functioning), four treatment tasks (i.e., individual, group, and family counselling, crisis intervention), and one miscellaneous task (i.e., making staffing decisions). Clinical task competency ratings made by social work students did not differ for psychologists, psychiatrists, and social workers for two treatment tasks (i.e., group and family psychotherapy), and for two miscellaneous tasks (i.e., testifying as an expert witness in court, leading an interdisciplinary mental health team). Social work students rated psychologists as more competent than psychiatrists and social workers to perform four assessment tasks (i.e., administering intelligence and personality tests, performing intellectual and personality assessments), and one miscellaneous task (i.e., conducting research. Social work students rated social workers as significantly more competent than psychiatrists, but not psychologists to supervise/train individuals in the same and other mental health professions. They rated psychiatrists and psychologists as more competent than social workers to perform one assessment task (i.e., making diagnoses) and one treatment task (i.e., individual psychotherapy). Social work students rated psychiatrists as more competent than psychologists and social workers to prescribe/supervise use of medication.

Hypothesis Four

MHPQ Part D: Personal Contact. The fourth hypothesis stated that mental health professionals-in-training would report greater willingness to make referrals to members of their own discipline than to other disciplines. A summary variable was formed based on the mean ratings for likelihood of making referrals for minor and severe mental health problems. Table 19 lists group means and standard deviations for the summary variable.

A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) indicated significant overall effects for the mental health profession factor [$F(2,312) = 16.6$, $p < .001$] and for the interaction (programme by profession) [$F(4,312) = 61.1$, $p < .001$]. The current programme factor was not significant [$F(2,156) = 2.6$, ns].

Within-subject pairwise t-tests indicated that clinical psychology students were more likely to make referrals to psychologists than to either psychiatrists [$t(66) = 11.0$, $p < .001$] or social workers [$t(66) = 13.9$, $p < .001$], but were more likely to make a referral to psychiatry than to social work [$t(66) = 2.5$, $p < .05$, two-tailed]. Psychiatric residents reported a significantly greater likelihood of making referrals to psychiatrists than to either psychologists [$t(22) = 6.6$, $p < .001$] or social workers [$t(22) = 7.4$, $p < .001$]; they were more likely to make

Table 19

Group Means (and Standard Deviations) for Overall Likelihood of Making Referrals
to Each of the Mental Health Professions[a]

	Clinical Psychology Students (n = 67)	Psychiatry Residents (n = 23)	Social Work Students (n = 69)
Psychology	6.0 (1.1)	3.3 (1.5)	4.3 (1.6)
Psychiatry	3.4 (1.5)	5.2 (1.0)	3.5 (1.5)
Social Work	2.8 (1.5)	2.9 (1.6)	5.1 (1.4)

[a] higher means reflect a greater reported likelihood of referring.

referrals to psychology than to social work [t(22) = 2.1, p < .03, two-tailed]. Social work students were more likely to refer to social workers than to psychologists [t(68) = 4.2, p < .001] or psychiatrists [t(68) = 7.2, p < .001] but reported greater willingness to make referrals to psychologists than to psychiatrists [t(68) = 3.4, p < .01, two-tailed]. Group means and standard deviations for likelihood of making referrals for minor and severe mental health problems are presented in Appendix L.

Hypothesis Five

MHPQ Part E: Personality Characteristics. The fifth hypothesis stated that personal contact with mental health professionals or professionals-in-training would predict more positive personality attribution ratings for members of each mental health profession. For the purposes of this analysis, personality attribute ratings were averaged across items and dimensions to yield one summary variable. A composite personality attribute rating was formed because it was deemed to be more representative of personality attributes than individual attribute ratings. Proportion of friends and amount of time spent socializing with mental health professionals or professionals-in-training in each discipline were used as predictors in a series of standard multiple regressions (by professions rated). Computation of the condition indices, variance proportions, tolerance, and

correlation matrix of regression coefficients revealed that the independent variables were not multicollinear.

The multiple regression for predicting overall personality ratings of psychologists was not significant $[F(2,130) < 1]$ so the contributions of the independent variables were not analyzed. The multiple regression for predicting overall personality ratings of psychiatrists was significant $[F(2,122) = 12.2, p < .001]$. The proportion of friends who are psychiatrists or psychiatric residents $[F(1,122) = 6.0, p < .05]$ and the amount of time spent socializing with professionals or students of psychiatry $[F(1,122) = 7.7, p < .01]$ were both significant predictors of perceived overall personality ratings for psychiatrists.[3] However, knowing the scores on these two predictors accounted for only 17% of the total variance in the dependent variable. The multiple regression for predicting overall personality ratings of social workers was not significant $[F(2,136) = 2.9, ns]$ and the contributions of individual predictors were not analyzed.

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[3]When the current programme of study variable was included in this regression equation, the proportion of friends who are psychiatrists or psychiatric residents was no longer listed as a significant predictor and the new equation accounts for 18% of personality attribute rating variance.

Hypothesis Six

MHPQ Part F: Task Performance. The sixth hypothesis
stated that task-oriented contacts with mental health
professionals and professionals-in-training would predict
higher overall clinical task competency ratings. The
overall clinical task competency variable was formed by
averaging ratings on the 21 individual clinical tasks
assessed. An overall task competency variable was deemed to
be most representative of clinical task competency
perceptions. A series of standard multiple regressions were
performed (by profession rated) using overall competency as
the dependent variable and mean composite ratings of
interdisciplinary contact and amount of prior work
involvement with mental health professionals as the
predictors. Computation of the condition indices, variance
proportions, tolerance, and correlation matrix of regression
coefficients revealed that the independent variables were
not multicollinear.

The multiple regression for predicting overall
competency ratings of psychologists was significant
[$F(2,151)$ = 3.7, p < .05]. Amount of interdisciplinary
contact was a significant predictor of the overall task
competency ratings of psychologists [$F(1,151)$ = 7.3, p <
.01] but the amount of prior work involvement was not

[$F(1,151) < 1$].[4] Together, scores on these two predictor variables accounted for only 5% of the variance in the dependent variable.

The multiple regression for predicting ratings of overall competency of psychiatry was significant [$F(2,151)$ = 4.2, $p < .05$]. Amount of interdisciplinary contact contributed significantly to the prediction of overall task competency ratings of psychiatrists [$F(1,151)$ = 7.3, $p < .01$] but prior work involvement did not [$F(1,151)$ = 2.9, ns].[5] Together, scores on these two predictors accounted for only 5% of the variance in the dependent variable.

The multiple regression for predicting ratings of overall competency of social workers was significant [$F(2,151)$ = 38.5, $p < .001$]. Amount of interdisciplinary contact contributed significantly to the prediction of overall task competency ratings of social workers [$F(1,151)$ = 72.2, $p < .001$] but prior work involvement was not

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[4]When the current programme of study variable was added into this regression equation, amount of interdisciplinary contact was no longer listed as a significant predictor of overall competency ratings of psychologists and the new regression equation accounts for 6% of competency rating variance.

[5]When the current programme of study variable was added into this regression equation, amount of interdisciplinary contact was no longer listed as a significant predictor, but the current programme of study variable was listed as a significant predictor. The new equation accounts for 27% of competency rating variance.

[$F_{(1,151)}$ < 1].[6] Together, scores on these two predictors accounted for 34% of the variance in the dependent variable.

Hypothesis Seven

MHPQ Part D: Personal Contact. The seventh hypothesis stated that interdisciplinary task-oriented contacts with mental health professionals and professionals-in-training would predict a greater overall likelihood of making interdisciplinary referrals. A series of standard multiple regressions were performed using likelihood of making referrals as the dependent variable and composite ratings of interdisciplinary contact and amount of prior work involvement with mental health professionals as the predictors. An interdisciplinary contact composite score was deemed to be the most representative contact score. Computation of the condition indices, variance proportions, tolerance, and correlation matrix of regression coefficients revealed that the independent variables were not multicollinear.

The multiple regression for predicting likelihood of making referrals to psychologists was significant [$F_{(2,155)}$ = 33.2, p < .001]. Interdisciplinary contact was a significant predictor [$F_{(1,155)}$ = 61.9, p < .001] but prior

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[6]When current programme of study was added as a predictor into this regression equation, interdisciplinary contact was no longer listed as a significant predictor, but current programme was listed as a significant predictor of overall ratings of social workers' competency. The new regression equation now accounts for 39% of competency rating variance.

work involvement was not [F(1,155 < 1].[7] Together, scores
on these two predictors accounted for 30% of the variance in
the dependent variable.

The multiple regression for predicting likelihood of
making referrals to psychiatrists was significant [F(2,155)
= 17.0, p < .001]. Interdisciplinary contact was a
significant predictor [F(1,155) = 32.1, p < .001] but prior
work involvement was not [F(1,155) < 1].[8] Together, scores
on these two predictors accounted for 18% of the variance in
the dependent variable.

The multiple regression for predicting likelihood of
making referrals to social workers was significant [F(2,155)
= 39.4, p < .001]. Both interdisciplinary contact [F(1,155)
= 63.4, p < .001] and amount of involvement with
professionals prior to entering current programme [F(1,155)
= 4.5, p < .05] were significant predictors.[9] Together,
scores on these two predictors accounted for 34% of the

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[7]When current programme of study was entered into the
regression equation, both interdisciplinary contact and current
programme of study were listed as significant referral
predictors. The new equation accounts for 38% of the likelihood
of making a referral variance.

[8]Current programme of study was not found to be a
significant predictor when entered into the regression equation,
and the equation accounts for 18% of the dependent variable
variance.

[9]When current programme of study was entered into the
regression equation, amount of prior work involvement and current
programme of study were listed as significant predictors, but
interdisciplinary contact was no longer listed as a significant
referral predictor. The new equation accounts for 40% of the
likelihood of making a referral variance.

scores on these two predictors accounted for 34% of the variance in the dependent variable.

MHPQ Part G: Education/Qualifications

Each group of mental health professionals-in-training was asked to report how accurately they could describe the educational background, training, and professional qualifications required to practice as a psychologist, psychiatrist, and a social worker in the Province of Ontario. Table 20 shows the means and standard deviations for reported knowledge of education/qualifications necessary to practice each profession.

A two-factor ANOVA (current programme, mental health profession) with one factor repeated (mental health profession) was performed for knowledge of education/qualifications to practice as a mental health professional in Ontario. There were significant overall current programme [$F(2,152) = 3.1$, $p < .05$], mental health profession, [$F(2,304) = 6.6$, $p < .01$] and interaction (current programme by mental health profession) effects [$F(4,304) = 60.0$, $p < .001$].

Within-subject pairwise t-tests revealed that clinical psychology students rated themselves as more knowledgable about the qualifications necessary to practice as a psychologist than as either a psychiatrist [$t(67) = 11.5$, $p < .001$] or a social worker [$t(67) = 12.0$, $p < .001$], but rated themselves as more knowledgeable about the

Table 20

Group Means (and Standard Deviations) for Reported Knowledge of Education/

Qualifications Necessary for Practice in the Province of Ontario[a]

	Clinical Psychology Students (n = 68)	Psychiatry Residents (n = 19)	Social Work Students (n = 69)
Psychology	9.2 (1.0)	5.9 (2.5)	6.7 (2.4)
Psychiatry	7.2 (1.8)	9.1 (1.9)	6.0 (2.7)
Social Work	6.4 (2.1)	5.1 (2.8)	8.5 (2.1)

[a] a higher score reflects greater knowledge of qualifications

qualifications necessary to practice as a psychiatrist than as a social worker [$t(67)$ = 3.7, p < .001, two-tailed]. Psychiatric residents rated themselves as more knowledgable about qualifications necessary to practice as a psychiatrist than either as a psychologist [$t(21)$ = 5.2, p < .001] or a social worker [$t(20)$ = 5.8, p < .001], but rated themselves as more knowledgeable about the qualifications required to practice as a psychologist than as a social worker [$t(20)$ = 2.9, p < .01, two-tailed]. Social work students reported significantly more knowledge of requirements necessary to practice social work than either psychology [$t(68)$ = 5.5, p < .001] or psychiatry [$t(68)$ = 6.5, p < .001], but reported more knowledge of requirements necessary to practice psychology than psychiatry in Ontario [$t(68)$ = 2.6, p < .02, two-tailed].

<center>MHPQ Part H: Overall Ratings</center>

Respondents made general ratings of each mental health profession and social work students tended to rate the professions more positively than did clinical psychology or psychiatry residents. Appendix M discusses the overall ratings in more detail.

Table 21 presents a summary of the results of preliminary analyses and hypothesis testing.

<center>Exploratory Analyses</center>

Exploratory analyses were conducted to improve the predictability of the regression equations. The independent

Table 21

Summary of the Results of Preliminary Analyses and of Hypothesis Testing

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PRELIMINARY ANALYSES

The purpose of the preliminary analyses was to determine extent of the interdisciplinary task-related and interdisciplinary interpersonal contact.

Results

Two-factor ANOVA's and within-subject pairwise t-tests revealed that mental health professionals-in-training have significantly more same-discipline prior work involvement, task-related interaction, friends, and spend more time socializing with same-discipline members than they do with other-discipline members.

HYPOTHESIS ONE(A)

This hypothesis stated that all personality attribution ratings of mental health professionals would be positive, but that same-discipline conscientiousness, emotional stability, culture, and leadership ratings would be more positive than other-discipline ratings of these personality attributions.

Results

All same-discipline and other-discipline ratings of personality attributes were above the neutral score of 4.0 except that psychiatrists were rated more negatively on agreeableness and culture dimensions by clinical psychology and social work students. Clinical psychology and social work students made positive same-discipline ratings on conscientiousness and culture dimensions. Psychiatric residents did not show same-discipline bias in their ratings of personality attributes of Mental Health Professionals.

HYPOTHESIS ONE(B)

Psychiatrists were expected to be perceived as less agreeable whereas social workers were expected to be perceived as more agreeable and more extraverted than members of other mental health disciplines.

Results

Clinical psychology students, psychiatric residents, and social work students perceived social workers to be significantly more agreeable than psychologists and psychiatrists. Clinical psychology and social work students rated social workers as significantly more extraverted than psychologists and psychiatrists.

Table 21 continues

HYPOTHESIS TWO

The second hypothesis stated that there would be differences in self-reported ratings of Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding.

Results

One-way ANOVA's and Tukey HSD pairwise comparisons revealed clinical psychology students and psychiatric residents made significantly higher self-ratings than social work students on Understanding.

HYPOTHESIS THREE

The third hypothesis stated that mental health professionals-in-training would rate their own discipline as more competent to perform clinical tasks than members of other disciplines.

Results

Two-factor ANOVA's and within-subject pairwise dependent t-tests indicated that clinical psychology students and psychiatric residents rated their own disciplines as more competent than the other disciplines; social work students, however, rated psychologists as more competent overall than psychiatrists or social workers. Clinical psychology students, psychiatric residents, and social work students rated their own profession as most competent at eighteen, seven, and seven tasks, respectively.

HYPOTHESIS FOUR

The fourth hypothesis stated that mental health professionals-in-training would report greater willingness to make referrals to same-discipline than other-discipline members.

Results

Two-factor ANOVA's and within-subject dependent t-tests indicated that there was a greater willingness to make referrals to same-discipline members than to other-discipline members.

Table 21 continues

HYPOTHESIS FIVE

The fifth hypothesis stated that personal contact with mental health professionals or professionals-in-training would predict more positive personality attributions for members of each mental health profession.

Results

A series of standard multiple regression analyses were computed and revealed that the proportion of friends who are psychiatrists or psychiatric residents and the amount of time spent socializing with professionals or students of psychiatry were significant predictors of overall personality ratings for psychiatrists. These variables were not significant predictors of overall personality ratings of clinical psychology or social work students.

HYPOTHESIS SIX

The sixth hypothesis stated that task-oriented contacts with mental health professionals and professionals-in-training would predict higher overall clinical task competency ratings.

Results

A series of standard multiple regression analyses were computed and revealed that the amount of interdisciplinary contact contributed significantly to the prediction of overall task competency ratings of clinical psychology students, psychiatric residents, and social work students. Prior work involvement was not a significant predictor of task competency ratings.

HYPOTHESIS SEVEN

The seventh hypothesis stated that interdisciplinary task-oriented contacts with mental health professionals and professionals-in-training would predict a greater overall likelihood of making interdisciplinary referrals.

Results

A series of standard multiple regression analyses were computed and revealed that the amount of interdisciplinary contact contributed significantly to the prediction of the likelihood of making referrals to psychologists, psychiatrists, and social workers. Prior work involvement was a significant predictor for making referrals to social workers.

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variables used in the above regression equations were not strong predictors and knowledge of qualifications necessary to practice in the Province of Ontario was deemed to be a possible predictor of task performance and likelihood of making referrals. Independent variables used to predict task competency ratings and likelihood of making referrals did not account for much of the variance in the dependent variables and therefore reported knowledge of qualifications necessary to practice in the Province of Ontario was added to the regression equation. Given that the exploratory analyses were not formulated from theory or from findings of previous studies, and that the sample size is relatively large, the likelihood of finding non-meaningful results increased, and the alpha level was therefore pre-set at < .001 in order to minimize the chance of capitalizing on small, non-meaningful effects.

Task Performance

Knowledge of qualifications necessary to practice as a professional in Ontario may contribute to the prediction of task performance ratings and therefore, this variable was added to the exploratory regression equations. Prior work involvement with mental health professionals did not make a significant contribution to the prediction of task competency ratings and was therefore not included in this exploratory analysis. Amount of interdisciplinary contact accounted for a small but statistically significant portion

of the variance in task performance scores and was therefore included in the exploratory analyses. A series of standard multiple regressions were performed (by profession rated) using overall task competency as the dependent variable and mean composite ratings of current interdisciplinary contact and knowledge of qualifications necessary to practice in the Province of Ontario as the predictors. Computation of the condition indices, variance proportions, tolerance, and correlation matrix of regression coefficients revealed that the independent variables were not multicollinear.

The multiple regression for predicting overall competency ratings of psychologists was significant [$F(2,146) = 6.9$, $p < .001$]. Neither interdisciplinary contact [$F(1,146) < 1$] nor knowledge of qualifications [$F(1,146) = 8.1$, ns] were significant predictors however. The multiple regression for predicting overall competency ratings of psychiatrists was not significant [$F(2,146) = 1.5$, ns] and the contributions of individual predictors were not analyzed.

The multiple regression for predicting ratings of overall competency of social workers was significant [$F(2,145) = 47.3$, $p < .001$]. Amount of current interdisciplinary contact [$F(1,145) = 47.5$, $p < .001$] and reported knowledge of qualifications to practice in Ontario [$F(1,145) = 15.2$, $p < .001$] were both significant predictors. Together, scores on these two predictors

accounted for 40% of the variance in the dependent variable.[10]

Likelihood of Making Referrals

Knowledge of qualifications necessary to practice as a mental health professional in Ontario may contribute to the prediction of likelihood of making referrals and was therefore added to the regression equation. Prior work involvement contributed significantly to the prediction of making referrals to social workers but not to psychologists or psychiatrists and therefore was included only in the regression equation to predict referrals to social workers. Interdisciplinary contact also contributed to the referral prediction equation and was therefore included in the exploratory analyses. A series of standard multiple regressions were performed using likelihood of making referrals as the dependent variable and composite ratings of interdisciplinary contact, (prior work involvement) and knowledge of qualifications to practice in Ontario as the predictors. Computations of the condition indices, variance proportions, tolerance, and correlation matrix of regression coefficients revealed that the independent variables were not multicollinear.

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[10]When the current programme of study variable was added into this regression equation, amount of interdisciplinary contact was no longer listed as a significant predictor of overall competency ratings of social workers. The new equation accounts for 44% of competence rating variance.

The multiple regression for predicting likelihood of making referrals to psychologists was significant [$F_{(2,150)}$ = 33.2, p < .001]. Interdisciplinary contact was a significant predictor [$F_{(1,150)}$ = 35.9, p < .001] but knowledge of qualifications to practice in Ontario was not [$F_{(1,150)}$ = 2.2, ns]. Together, scores on these two predictors accounted for 31% of the variance in the dependent variable.

The multiple regression for predicting likelihood of making referrals to psychiatrists was significant [$F_{(2,150)}$ = 14.3, p < .001]. Interdisciplinary contact was a significant predictor [$F_{(1,150)}$ = 25.0, p < .001] but knowledge of qualifications to practice in Ontario was not [$F_{(1,150)}$ < 1]. Together, scores on these two predictors accounted for 16% of the variance in the dependent variable.

The multiple regression for predicting likelihood of making referrals to social workers was significant [$F_{(3,148)}$ = 27.8, p < .001]. Current interdisciplinary contact [$F_{(1,148)}$ = 44.9, p < .001] was a significant predictor, but amount of prior involvement [$F_{(1,148)}$ = 4.5, ns], and knowledge of qualifications to practice in Ontario [$F_{(1,148)}$ = 3.7, ns] were not. Together, scores on these three predictors accounted for 36% of the variance in the independent variable.

Contact Variables and Reported Knowledge of Qualifications

Necessary to Practice in the Province of Ontario

Interdisciplinary or interpersonal contact may be related to reported knowledge of qualifications necessary to practice as a professional in Ontario. A separate series of standard multiple regressions were performed using knowledge of qualifications necessary to practice in the province of Ontario as the dependent variable and either 1) composite ratings of interdisciplinary contact and amount of prior work involvement with mental health professionals or 2) proportion of friends and amount of time spent socializing with mental health professionals and professionals-in-training as the predictors. Computations of the conditions indices, variance proportions, tolerance, and correlation matrix of regression coefficients revealed that the independent variables were not multicollinear.

Interdisciplinary contact. The multiple regression equation for predicting knowledge of psychologists' qualifications was significant [$F(2,152) = 28.4$, $p < .001$]. Interdisciplinary contact was a significant predictor [$F(1,152) = 50.0$, $p < .001$] but prior work involvement was not [$F(1,152) < 1$]. Together, scores on these two predictors accounted for 27% of the variance in the dependent variable.[11]

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[11]When current programme of study was entered into the regression equation, current programme of study was listed as a significant predictor, but interdisciplinary contact was no

The multiple regression for predicting knowledge of psychiatrists' qualifications was significant [$F(2,152)$ = 14.7, p < .001]. Interdisciplinary contact was a significant predictor [$F(1,152)$ = 13.8, p < 0.001] but prior work involvement was not [$F(1,152)$ = 8.3, ns]. Together, scores on these two predictors accounted for 16% of the variance in the dependent variable.[12]

The multiple regression for predicting knowledge of necessary qualifications of social workers to practice in Ontario was significant [$F(2,151)$ = 14.0, p < .001]. Interdisciplinary contact was a significant predictor [$F(1,151)$ = 24.7, p < .001] but prior work involvement was not [$F(1,151)$ < 1]. Together, scores on these two predictors accounted for 16% of the variance in the dependent variable.[13]

Interpersonal contact. The multiple regression for predicting knowledge of qualifications necessary for

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longer listed as a significant predictor. The new equation accounts for 35% of the variance in the dependent variable.

[12]When current programme of study was entered into the regression equation, current programme of study was listed as a significant predictor, but interdisciplinary contact was no longer listed as a significant predictor. Together, these variables account for 21% of the variance in the dependent variable.

[13]When current programme of study was entered into the regression equation, current programme of study was listed as a significant predictor, but interdisciplinary contact was no longer listed as a significant predictor. Together, these variables account for 25% of the variance in the dependent variable.

psychologists to practice in Ontario was significant [$F_{(2,131)} = 15.6$, $p < .001$]. Proportion of friends in psychology was a significant predictor [$F_{(1,131)} = 18.1$, $p < .001$], but amount of time spent socializing with professionals or students in psychology was not [$F_{(1,131)} = 2.3$, ns]. Together, these two predictors accounted for 19% of the variance in the dependent variable.[14]

The multiple regression for predicting knowledge of qualifications necessary for psychiatrists to practice in Ontario was not significant [$F_{(2,122)} = 6.8$, ns] and the contributions of individual predictors were not analyzed. The multiple regression for predicting knowledge of qualifications necessary for social workers to practice in Ontario was significant [$F_{(2,137)} = 9.5$, $p < .001$]. Proportion of friends who are professionals or students of social work was a significant predictor [$F_{(1,137)} = 13.4$, $p < .001$], but amount of time spent socializing with social workers or social work students was not [$F_{(1,137)} = 1.5$, ns]. Together, scores on these two predictors accounted for 12% of the variance in the dependent variable.[15]

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[14]When current programme of study was entered into the regression equation, proportion of friends was no longer listed as a significant predictor, but current programme of study was listed as a significant predictor. The regression equation accounted for 34% of the variance in the dependent variable.

[15]When the current programme of study variable was added into this regression equation, proportion of friends in social work was no longer listed as a significant predictor of knowledge of qualifications to practice social work, but current programme of study was listed as a significant predictor. The variables in

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this regression equation accounted for 25% of the variance of the dependent variable.

CHAPTER IV

DISCUSSION

The results will be discussed in seven sections. The
sections are: 1) preliminary analyses; 2) hypotheses; 3)
exploratory analyses; 4) limitations of the study; 5)
implications; 6) suggestions for further research; and 7)
conclusions.

Preliminary Analyses

The purpose of the preliminary analyses was to explore
the amount and type of interdisciplinary task-related and
interpersonal contact. It was expected that more same-
discipline than other-discipline contact would occur for
both types of contact.

As expected, mental health professionals-in-training
report significantly more prior work experience, current
task-related contact, friendships, and time spent
socializing with same-discipline mental health professionals
than with other-discipline mental health professionals or
mental health professionals-in-training. Overall,
interdisciplinary contact of any type is infrequent and of
limited duration, although clinical psychology and social
work students report having more interdisciplinary contact,
more friendships, and more frequent social contact with each
other than with psychiatrists or psychiatry residents. Few
mental health professionals-in-training have family members
in the mental health professions.

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These findings clearly support Wallace and Rothstein's (1977) observations that there is very little interdisciplinary contact during training of mental health professionals. Bloom and Parad (1976) suggest that psychologists and psychiatrists do not seek interdisciplinary contact because of their concern that interdisciplinary collaboration with more experienced and knowledgeable professionals may cause mental health professionals-in-training to lose their professional identity and roles may become blurred. Bloom and Parad's findings imply a strong need to preserve professional territory. Given that Levinger and Snoek's (1972) theory of interpersonal attraction and Hypothesis Six and Seven results suggest that interdisciplinary contact is related to developing positive cross-disciplinary competency ratings, such territoriality is arguably an impediment to good working relationships. Clearly then, as long as mental health professionals strive to preserve professional territory, disciplinary interactions will be limited, and professionals-in-training will continue to show same-discipline preferences.

Hypothesis One(a)

Previous research suggests that personality attributes of mental health professionals tend to be perceived in a positive light by members from other disciplines (Folkins et al., 1981; McGuire et al., 1986). This hypothesis stated

that all personality attribution ratings of mental health professionals would be positive, but that same-discipline conscientiousness, emotional stability, culture, and leadership ratings would be more positive than other-discipline ratings of these personality attributions. There is partial support for this hypothesis. Descriptive and inferential statistics showed that clinical psychology and social work students made more positive same-discipline than other-discipline personality attribute ratings. Mental health professionals-in-training rated each of the professions similarly on emotional stability and leadership, psychiatric residents rated all professions similarly on each personality attribute dimension, and clinical psychology and social work students rated their own profession most positively and rated psychiatry most negatively on conscientiousness and culture.

The present findings thus provide some support for the hypothesis made, based on Levinger and Snoek's (1972) theory, that professionals-in-training have more positive attitudes toward same-discipline than other-discipline members and the positive attitudes may be related to more same-discipline than other-discipline contact. Specifically, clinical psychology and social work students made more positive same-discipline than other-discipline ratings for conscientiousness and culture dimensions, but did not do so for emotional stability and leadership

dimensions. Therefore, there was a tendency to make more positive same-discipline than other discipline personality ratings but it was not as widespread as predicted.

It is unclear why psychiatric residents did not make more positive same-discipline than other-discipline ratings. Zander, Cohen, and Stotland (1957) found that psychiatrists felt more powerful than psychologists and social workers and were likely to relinquish some of that power to these professionals. Extrapolating from these findings, psychiatric residents in the present study may believe that psychiatry is more powerful than other professions, and may not therefore feel threatened by them. Consequently, psychiatric residents have positive interdisciplinary personality attribute attitudes for the less powerful professions. In contrast, clinical psychology and social work students may believe that their professions are less powerful than psychiatry, feel threatened by them, and in turn rate psychiatrists less positively on some personality attributes. Alternatively, this sample of psychiatric residents who rate all professionals' personality attributes similarly may not represent attitudes of the psychiatric resident population. Twenty-eight percent of residents who agreed to participate returned completed questionnaires and it is therefore difficult to know if the minority of residents who participated represent the majority of residents who did not participate.

Hypothesis One(b)

Psychiatrists were expected to be perceived as less agreeable whereas social workers were expected to be perceived as more agreeable and more extraverted than members of the other mental health disciplines. This hypothesis is partially supported. Clinical psychology and social work students agree that social workers are the most agreeable and extraverted and that psychiatrists are least agreeable of the three professions. Psychiatric residents agree that social workers are more agreeable than psychiatrists but not psychologists and suggest that all three groups of professionals are similarly extraverted.

These results suggest that personality attribute stereotypes exist at the mental health professional-in-training level and interdisciplinary interactions may be affected by the stereotypes. Perceptions that social workers are the most agreeable may increase the likelihood of interdisciplinary interactions. Conversely, perceptions that psychiatrists are the least agreeable of the three professions, may serve as a self-fulfilling prophecy and inhibit interdisciplinary interactions. Mental health professionals-in-training may unintentionally elicit disagreeable behaviour from psychiatrists, thereby reinforcing this attitude, and according to the primacy effect in attitude formation, decrease the likelihood of the attitudes changing.

Hypothesis Two

The second hypothesis stated that there would be differences between the three groups of respondents on the self-reported personality attributes of Abasement, Affiliation, Autonomy, Dominance, Succorance, and Understanding. This hypothesis was only marginally supported. Clinical psychology students and psychiatric residents rated themselves significantly higher on a measure of Understanding than did social work students. There were no significant differences among clinical psychology students, psychiatric residents, and social work students on the remaining personality attribute self-ratings.

These results are somewhat surprising given the results of hypotheses one (a) and (b) that perceived personality attributes differ across professions. The results suggest that there are few actual personality attribute differences among mental health professionals-in-training despite such perceived differences. If it can be assumed that personality attributes of mental health professionals and professionals-in-training are similar, it would seem likely that perceived personality attribute differences among mental health professionals originate in the perceiver and not in the perceived. This would support the hypothesis that a self-fulfilling prophecy is operating.

Clinical psychology students and psychiatric residents rated themselves as more analytical, investigative,

theoretical, and probing than social workers. Heavy research components of medical and psychological training may partially explain why students of clinical psychology and psychiatry score higher on Understanding. Older respondents, however, also rate themselves as more analytical, investigative, etc. Therefore, higher Understanding scores may also reflect the finding that clinical psychology students and psychiatric residents tend to be older. These differences on the Understanding measure may contribute to friction among mental health professionals, particularly among older analytically and theoretically oriented psychologists and psychiatrists and young practically-oriented social workers. Each approach is of value but may not be fully appreciated by the others and cause problems in communication.

Hypothesis Three

The third hypothesis stated that mental health professionals-in-training would rate members of their own discipline as more competent to perform clinical tasks than members of other disciplines. This hypothesis was partially supported. Students in clinical psychology, psychiatry, and social work show a tendency to rate same-discipline members as more competent to perform clinical tasks than other-discipline members, although clinical psychology students show the greatest degree of same-discipline preference.

Clinical psychology students and psychiatric residents

rated their own profession as the most competent overall to perform clinical tasks; social work students, however, rated psychologists as the most competent overall to perform clinical tasks. Descriptive analyses show that each group of professionals-in-training makes higher same-discipline task competency ratings than other-discipline ratings on at least half of the items. Inferential statistical analyses, however, reveal that clinical psychology students rated clinical psychologists as most competent to perform the majority of assessment, treatment, and miscellaneous tasks while psychiatric residents and social work students distributed competence ratings more evenly across the three professions.

The tendency to rate same-discipline members as the most competent to perform clinical tasks varies according to the type of analysis used; it is clear from these results, however, that clinical psychology students perceive same-discipline members as more competent to perform most clinical tasks than other-discipline members across all types of analyses. These results partially replicate the Schindler et al. (1981) findings that psychologists and psychiatrists both showed same-discipline task competency preference. The main difference is that clinical psychology students in the present study show a stronger same-discipline task competency preference than do psychiatric residents and social work students.

There are many ways to interpret these results: First, psychologists are the most competent at the tasks listed. Social work students also rated psychologists as the most competent overall to perform clinical tasks, thus providing weak support for this explanation. Second, the tasks listed in this study may not represent all possible clinical tasks but be limited to tasks that psychologists are most competent to perform, thereby creating the impression that clinical psychology students perceive more same-discipline than other-discipline task competency across all possible tasks. Third, clinical psychology students have over-inflated views of psychologists' competence.

A fourth possible interpretation of these results is that attitudes of this sample of psychiatric residents and social work students are not representative of the perceptions of all psychiatric residents or social work students. For example, participating psychiatric residents may be more interested in, and in favour of, multidisciplinary team functioning than nonparticipating psychiatric residents. Anecdotal support for this explanation comes from one psychiatric resident who returned the questionnaires with a note stating "I find this research study to be irrelevant and not worthy of participation. I feel this is an affront to psychiatry". Clearly, this view does not reflect the attitudes of residents participating in the study, but may reflect attitudes of residents who did

not participate.

A fifth interpretation is that situational demand characteristics may have influenced the outcome. Page and Yates (1975) manipulated university students' attitude ratings through subtle situational changes and undergraduates participating in Kroger and Turnbull's (1975) study, when directed to, were able to fake specific social roles. Therefore, respondents' knowledge that a psychology graduate student was conducting the study may have influenced psychiatric residents and social work students to make more positive other-discipline and less positive same-discipline ratings in order to present a more positive image.

It is not clear which, if any, of these explanations best explains why clinical psychology students show a stronger same-discipline task competence preference than psychiatric residents or social work students. It is clear, however, that this finding may have important implications for clinical practice. It seems likely that friction could develop or be maintained among clinical psychology students, mental health professionals and professionals-in-training over task competence issues, since attitudes about task competency are so dissimilar. Arguably, such interdisciplinary tension may impede effective interdisciplinary team functioning, and ultimately, patient care will suffer.

Hypothesis Four

The fourth hypothesis stated that mental health professionals-in-training would report greater willingness to make referrals to members of their own discipline than to members of other disciplines. This hypothesis was supported. Mental health professionals-in-training report a greater willingness to refer someone close to them to same-discipline rather than other-discipline professionals.

These results are difficult to interpret in light of Hypothesis Three findings that clinical psychology students are the only professionals-in-training showing a strong same-discipline task competence preference. At least two explanations can, nonetheless, be pursued. First, willingness to make referrals is based not on perceptions of discipline competence but rather on another, unknown, criterion. Second, respondents may have experienced an attitudinal shift when asked to refer someone close to them for professional help; in the abstract, psychiatric residents and social work students may show no strong same-discipline task competence preference but when the issue becomes personal, same-discipline preferences show.

Hypothesis Five

The fifth hypothesis stated that personal contact with mental health professionals or professionals-in-training would predict more positive personality attribute ratings for members of each mental health profession. This

hypothesis was partially supported. Proportion of friends who are psychiatrists or psychiatric residents and amount of time spent socializing with psychiatrists or psychiatric residents are significant predictors of overall personality attribute ratings. When psychiatric resident group membership is added into the equation, it shares and accounts for the same portion of personality attribute rating variance as friends who are psychiatrists or psychiatric residents. It is therefore difficult to tease apart the effects of these two independent variables. In contrast, amount of time spent socializing with psychiatric residents remains a significant predictor, even after group membership is entered in the regression equation. Therefore, group membership may be a sufficient condition to develop positive same-discipline personality attribute attitudes. However, extrapolating from the Levinger and Snoek (1972) theory, interdisciplinary interpersonal contact may be a necessary condition to form positive other-discipline personality attribute attitudes.

Proportion of friends and amount of time spent socializing are not significant predictors of personality attribute ratings for psychologists or social workers. As such, a positive personality attribute stereotype may be in effect whereby mental health professionals-in-training do not need interdisciplinary interpersonal contact with psychology and social work discipline members in order to

hold positive attitudes toward them. Conversely, a negative personality attribute stereotype may be in effect for the psychiatry profession. However, the argument that interpersonal interdisciplinary contact is a sufficient condition to improve personality attribute attitudes suggests that this negative stereotype may be combated via increased contact.

Hypothesis Six

The sixth hypothesis stated that task-oriented contacts with mental health professionals and professionals-in-training predict higher overall clinical task competency ratings. The sixth hypothesis was partially supported and therefore, some further support is found for Levinger and Snoek's (1972) theory. Interdisciplinary task-oriented contact is a significant predictor of task competency ratings for psychologists, psychiatrists, and social workers, but it predicts very little of the total variance of psychologists' and psychiatrists' competency ratings. Adding current programme of study to the regression equation improves prediction of task competency ratings. However, current programme of study and interdisciplinary interaction are correlated and share the same portion of variance of psychologists', psychiatrists', and social workers' task competency ratings. It is thus difficult to interpret the relative contribution of programme of study and interdisciplinary interaction. It would appear, however,

that group membership and interdisciplinary task-oriented contact contribute to development of positive task competency attitudes, although group membership appears to be the best predictor of task competence ratings.

Hypothesis Seven

The seventh hypothesis states that interdisciplinary task-oriented contacts with mental health professionals and professionals-in-training predict a greater overall likelihood of making interdisciplinary referrals. Partial support is found for the seventh hypothesis and for the Levinger and Snoek (1972) theory of interpersonal attraction. Interdisciplinary task-oriented contact predicts a greater likelihood of making referrals to psychologists, psychiatrists, and social workers and prior work involvement with social workers also predicts greater likelihood of making referrals to social workers.

Current programme of study effects predictions of making interdisciplinary referrals in the following manner: 1) both current programme of study and interdisciplinary contact are significant predictors for making referrals to psychologists, 2) interdisciplinary contact remains a significant predictor for making referrals to psychiatrists, and 3) both current programme of study and prior work involvement with social workers are significant predictors for making referrals to social workers. Again, however, current programme of study and interdisciplinary contact

share and account for the same variance in the prediction of likelihood of making referrals.

Although prior work involvement, interdisciplinary contact, and current programme of study have somewhat different effects in predicting likelihood of making referrals, it is clear that these results support the Levinger and Snoek (1972) theory that task-related contact with other-discipline members is related to making referrals to other disciplines. Similar to the interpretation of results made for Hypothesis Five, the present findings may also be explained by positing that group membership may be a sufficient condition for clinical psychology students and social work students to make same-discipline referrals but interdisciplinary task-related contact may be a necessary condition in order to make other-discipline referrals.

Exploratory Analyses

Task competence and knowledge of qualifications. Knowledge of training requirements and qualifications necessary to practice as a mental health professional was expected to contribute significantly to the prediction of overall task competency ratings. Results indicate however, that this variable was a significant predictor of social workers' overall task competency only. It is not known why knowledge of training requirements is significant for ratings of social workers' competence only. Nonetheless, these results suggest that knowledge of social workers

professional requirements will improve task competence attitudes.

Likelihood of making referrals and knowledge of qualifications. Knowledge of training requirements and qualifications necessary to practice as a mental health professional was not a significant predictor for making referrals to any group of mental health professionals. This finding is somewhat surprising. It is possible that this variable may not have been a significant predictor because the respondents may not be very knowledgeable about the training requirements of other disciplines. If this is so, educating professionals-in-training of the training requirements for other disciplines may improve the predictability of this variable.

Contact variables and reported knowledge of qualifications necessary to practice in the Province of Ontario. It was thought that interpersonal and task-related interdisciplinary contact would predict knowledge of qualifications required of other-discipline members to practice in the Province of Ontario. Interdisciplinary task-related contact was a significant predictor of knowledge of qualifications required to practice as a psychologist, psychiatrist, and as a social worker in Ontario. Proportion of friends who are members of psychology and social work disciplines predicted knowledge of requirements necessary to practice as psychologists and

social workers, respectively. Current programme of study and interdisciplinary contact and proportion of friends account for the same variance in knowledge of qualifications. Therefore, group membership accounts for knowledge of same-discipline requirements, but interdisciplinary contact and other-discipline friendships also may account for some knowledge of requirements necessary for other-discipline members to practice in Ontaric.

Limitations of the Study

The findings presented above should be considered in the context of the limitations of this study. Some limitations of this study were discussed in conjunction with specific hypotheses. Two other general limitations which should be noted, related to the representativeness of the samples and to psychometric properties of the MHPQ.

Overall, the sampling rate is low (ranging from 23% for psychiatry residents to 19% for clinical psychology students). There is, therefore, some question of the representativeness and generalizability of the findings. Representativeness could be defined in two ways: (1) with respect to mental health programmes sampled in Ontario and (2) with respect to the actual representativeness of the respondents from each programme. Many programmes were sampled (40% of social work schools, 80% of psychiatry, 100% of psychology) and therefore, with the possible exception of

the social work programmes, the sampling rate is representative of the Ontario mental health programmes. In contrast, participation within each programme is generally quite low. Therefore, this sample is not representative of most mental health programmes in Ontario. Psychiatric residents' questionnaire completion rate (usable returns/questionnaires distributed) was also quite low and therefore, psychiatric residents' attitudes are of questionable generalizability.

Several potential limitations relating to the psychometric properties of the MHPQ exist. First, the MHPQ purports to measure interdisciplinary contact and attitudes toward mental health professionals. Reliability and validity data are not available for this questionnaire. The findings of this study must therefore be considered within this context.

Second, a social desirability measure is recommended for the MHPQ because the intent of each question is easily discernable by respondents. It is therefore, relatively easy to respond to the questionnaire according to a variety of response sets. Part H (Overall Ratings) was included in the questionnaire as a measure of social desirability to address this limitation. However, the resulting information was inconclusive, and Part H is likely too short to be either reliable or valid.

And third, Hypothesis Two results suggest that

personality attribute stereotypes exist but that few real
personality differences exist among mental health
professionals-in-training. The MHPQ personality dimensions
used for rating the professions does not perfectly mirror
the PRF-E scales used for self-ratings and therefore, it is
important to use measures which more closely resemble each
other.

Implications

The findings support the observation of Wallace and
Rothstein (1977) that mental health professionals-in-
training have very little interdisciplinary contact. The
present findings extend this observation and also show that
interdisciplinary task-related contact is significantly
related to positive ratings of other-discipline task
competence. Therefore, these findings suggest that there
should be more interdisciplinary interaction during the
training of mental health professionals.

Levinger and Snoek's (1972) theory of interpersonal
attraction suggests that progress through the various
interpersonal attraction stages to the highest level
(mutuality) requires contact, communication, time,
opportunity, and sharing of similar needs and values. Task-
oriented (problem-focused) workshops could provide the forum
for improving interdisciplinary task-oriented attitudes.
For example, small task-oriented multidisciplinary student
groups could discuss treatment of a specific mental

disorder. Through sharing skills, experiences, and theoretical orientation, mental health professionals-in-training will learn more about specific skills and competence of other mental health disciplines, and ultimately, develop more positive cross-disciplinary attitudes.

The findings of this study suggest clearly that clinical psychology students believe that psychologists are the most competent of the three professional groups included in this study and that such a belief is not as strong in psychiatric residents or social work students. Since psychiatric residents and social work students do not share the same high opinion of psychology students, there will be conflict. Not only will interdisciplinary interactions be more tense but it is less likely that clinical psychology students will wish to consult with other-discipline team members. These findings have clear implications for multi-disciplinary team functioning because if team members do not confer with each other, specific aspects of treatment will be overlooked and ultimately the patient suffers.

Suggestions for further research

This study raises a number of issues that need to be addressed in order to better understand attitudes of mental health professionals-in-training. First, this study needs to be replicated since the sample may not be representative of mental health professionals-in-training in this province

or in other Canadian provinces. Since there was some difficulty recruiting across disciplines, an interdisciplinary team of researchers may have more success at ensuring a high level of participation across disciplines.

Second, it was recommended in the implications section that interdisciplinary task-related attitudes could be improved by organizing multidisciplinary task-related workshops for professionals-in-training. In order to determine the success of the intervention, interdisciplinary task-competency attitudes could be measured before, during, and after the interdisciplinary problem-focused workshops.

Third, in order to combat the formation of stereotyped attitudes about mental health professionals, it is necessary to know more about how these attitudes form and therefore, a longitudinal study of attitude formation is suggested. Attitude measurements of professionals-in-training could begin in the first year of the programme and continue on a regular basis until they have completed degrees. Attitudes of instructors could be measured and correlated with attitudes of students in order to understand the relationship between attitudes of instructors and students. Also, an assumption was made that attitudes are formed during the training years and are difficult to change once they are established. Therefore, measurements could be taken through the professional years also to determine if

and when there are attitudinal changes.

Fourth, respondents were asked to refer someone close to them who was experiencing minor or severe mental health problems for professional help. It is difficult to interpret the results because the referral question is vague. Items that include a specific referral question (e.g., for assessment, treatment, nature of mental health problem) may help to determine if same-discipline referral preferences are found under all conditions.

Finally, an assumption has been made in the course of this research that needs to be examined. It was assumed that day-to-day interdisciplinary tension does not fluctuate, but remains a constant force in multidisciplinary team meetings. This tension could be measured to test this assumption.

Conclusions

Although most hypotheses received partial support only, this study has made several contributions to understanding attitudes of mental health professionals-in-training. First, interdisciplinary task-related contact predicts positive task-competency ratings. Second, there is little support for perceptions that members of mental health disciplines have similar personality attributes (e.g., psychiatrists are bossy). Third, although there is some tendency for all groups of mental health professionals-in-training to rate same-discipline members as more competent

than other-discipline members, clinical psychology students perceive psychologists as the most competent at almost all clinical tasks. As such, perceptions of clinical psychology students are very likely contributing to tensions among mental health professionals.

In conclusion, Deutsch's (1982) theory of competition for limited resources and Levinger and Snoek's (1972) theory of interpersonal attraction provide an appropriate framework to understand attitudes of mental health professionals-in-training. Mental health facilities are always operating under conditions of limited resources. Professionals can respond to chronic underfunding through mechanisms of constructive or destructive conflict. If, as Levinger and Snoek predict, mental health professionals had very little interdisciplinary contact during their training years, task-related attitudes of mental health professionals will be negative, they will be less likely and willing to communicate in a positive manner with other-disciplines and a destructive conflict will result. If, on the other hand, interdisciplinary contacts are encouraged during the training years, interdisciplinary attitudes will be more positive, healthy communication will be more likely, and constructive interdisciplinary conflicts could develop.

APPENDICES

APPENDIX A

I. Mental Health Professions Questionnaire

II. Consent form

APPENDIX A

MENTAL HEALTH PROFESSIONS QUESTIONNAIRE

GENERAL INSTRUCTIONS

This questionnaire includes questions about your background, your current programme of study/training, the amount of contact you have with professionals and students in other mental health disciplines, and your opinions and attitudes about the three primary mental health professions: Psychiatry, Social Work, and Psychology.

Please answer every question in this booklet. There are no "right" or "wrong" responses -- just report your own experiences and opinions as honestly as you can. Your responses are confidential and will be identified only by a research code number. Please do not put your name on this questionnaire.

PART A: BACKGROUND INFORMATION

1. Age: _____   2. Sex: Female _____ Male _____

3. Current programme of study/training (check one): (a) Psychiatry _____

                                                     (b) Social Work _____

                                                     (c) Psychology _____

   Why did you choose this mental health profession over other mental health

   professions?_____

   _____

   _____

4. Prior to admission to your current programme of training/study, did you have any jobs that involved the delivery of mental health services?

   Yes _____ No _____ (check one).

   If yes, how often did you work with mental health professionals from each discipline prior to admission to your current programme of training/study?

   NEVER   ALWAYS
   OR RARELY   OR ALMOST ALWAYS
     1_____2_____3_____4_____5_____6_____7

   (a) Psychiatrists _____   (b) Social Workers _____   (c) Psychologists _____

5. What postsecondary degrees, diplomas or certificates, if any, have you earned previously (not including the one you are currently working towards)?

Degree/Diploma/Certificate	Area of Study	Year Awarded
(a)		
(b)		
(c)		

6. In total, how many years of postsecondary education have you completed?

_____

PART B: CURRENT PROGRAMME OF STUDY/TRAINING

1. What degree or level of professional qualification does your current programme of study/training lead to? _____

2. When did you begin the programme of study/training in which you are currently enrolled? Month _____ Year _____

3. How many years of study/training are typically required to attain the degree or professional qualifications you are currently working toward:

    (a) years of undergraduate training required _____

    (b) years of postgraduate training required _____

4. Please provide information on clinical practica, placements, internships, or residency requirements that you have completed during your current programme of study/training. Include your position (e.g., practicum student, trainee, intern, resident), the number of hours per week and number of weeks involved, and the type of setting (e.g., mental health clinic, psychiatric hospital).

Your Position	Hours/Week	# of Weeks	Setting
(a)			
(b)			
(c)			
(d)			
(e)			

PART C: INTERDISCIPLINARY INTERACTIONS

INSTRUCTIONS: For sections I and II on this page, use the scale printed below and indicate your responses by writing your number ratings in the spaces provided. If an activity doesn't apply to you at the present time, write N/A in the spaces.

NEVER OR RARELY						ALWAYS OR ALMOST ALWAYS
1	2	3	4	5	6	7

SECTION I. How often do you interact with (i.e., talk to, work with) PRACTICING PROFESSIONALS in each mental health discipline when you:

	Psychiatry	Social Work	Psychology
(a) attend classes or seminars			
(b) attend clinical supervision meetings			
(c) perform clinical tasks that involve client/patient contact			
(d) discuss clinical issues or problems with others			
(e) attend meetings related to clinical work (e.g., case conferences)			
(f) perform research-related tasks			
(g) perform adminstrative tasks (e.g. attending department meetings)			

SECTION II. How often do you interact with (i.e., talk to, work with) STUDENTS, INTERNS, OR RESIDENTS from each mental health discipline when you:

	Psychiatry	Social Work	Psychology
(a) attend classes or seminars			
(b) attend clinical supervision meetings			
(c) perform clinical tasks that involve client/patient contact			
(d) discuss clinical issues or problems with others			
(e) attend meetings related to clinical work (e.g., case conferences)			
(f) perform research-related tasks			
(g) perform adminstrative tasks (e.g., attending department meetings)			

PART D: PERSONAL CONTACT

1. Do you have family members/relatives who are mental health professionals?

   Yes _____ No _____   If yes, please indicate their relationship to you, and

   their profession.   EXAMPLES: (a) father-in-law: psychiatrist
                                  (b) wife: social worker
                                  (c) cousin: psychologist

   (a) _____ : _____

   (b) _____ : _____

   (c) _____ : _____

   (d) _____ : _____

   (e) _____ : _____

2. How many friends do you have who are practicing mental health professionals in:

   (a) Psychiatry_____ (b) Social Work_____ (c) Psychology_____

3. How many friends do you have who are students in a programme that will qualify
   them to work as a mental health professional in:

   (a) Psychiatry_____ (b) Social Work_____ (c) Psychology_____

4. In an average week, how many hours do you spend socializing (e.g., parties,
   recreational activities) with people who are training to be/are mental health
   professionals in:

   (a) Psychiatry_____ (b) Social Work_____ (c) Psychology_____

5. How many friends do you have who are NOT students or professionals in the

   mental health disciplines? _____

IMPORTANT: For questions 6 and 7 on this page, please use the scale printed below.

```
DEFINITELY                                              DEFINITELY
WOULD NOT                                               WOULD
    1_____2_____3_____4_____5_____6_____7
```

6. If someone close to you was experiencing minor mental health problems, how
   likely would you be to suggest they seek help from:

   (a) a Psychiatrist_____ (b) a Social Worker_____ (c) a Psychologist_____

7. If someone close to you was experiencing severe mental health problems, how
   likely would you be to suggest they seek help from:

   (a) a Psychiatrist_____ (b) a Social Worker_____ (c) a Psychologist_____

PART E: PERSONALITY CHARACTERISTICS

INSTRUCTIONS: Listed below are a number of scales that reflect personality dimensions on which people may differ. IN GENERAL, how would you describe the personality characteristics of professionals in each mental health discipline? Use the seven-point scales printed on the left side of the page and indicate your responses by writing your number ratings in the spaces provided.

		NUMBER RATINGS		
		Psychiatry	Social work	Psychology
1.	NEGLIGENT ___ CONSCIENTIOUS 1___2___3___4___5___6___7	___	___	___
2.	EFFECTIVE ___ INEFFECTIVE 1___2___3___4___5___6___7	___	___	___
3.	UNFRIENDLY ___ FRIENDLY 1___2___3___4___5___6___7	___	___	___
4.	OUTGOING ___ RESERVED 1___2___3___4___5___6___7	___	___	___
5.	INSENSITIVE ___ SENSITIVE 1___2___3___4___5___6___7	___	___	___
6.	CALM ___ EXCITABLE 1___2___3___4___5___6___7	___	___	___
7.	UNDEPENDABLE ___ DEPENDABLE 1___2___3___4___5___6___7	___	___	___
8.	COOPERATIVE ___ UNCOOPERATIVE 1___2___3___4___5___6___7	___	___	___
9.	TENTATIVE ___ CONFIDENT 1___2___3___4___5___6___7	___	___	___
10.	OPEN-MINDED ___ NARROW-MINDED 1___2___3___4___5___6___7	___	___	___
11.	TENSE ___ RELAXED 1___2___3___4___5___6___7	___	___	___
12.	DECISIVE ___ INDECISIVE 1___2___3___4___5___6___7	___	___	___
13.	ARROGANT ___ UNASSUMING 1___2___3___4___5___6___7	___	___	___
14.	SCRUPULOUS ___ UNSCRUPULOUS 1___2___3___4___5___6___7	___	___	___
15.	SECRETIVE ___ OPEN 1___2___3___4___5___6___7	___	___	___

PART F: TASK PERFORMANCE

INSTRUCTIONS: Listed below are a number of tasks that are performed by mental health professionals. IN GENERAL, how competent do you think professionals in each mental health discipline are to perform these tasks? Use the scale printed below and indicate your responses by writing your number ratings in the spaces provided.

NOT AT ALL
COMPETENT

VERY
COMPETENT

1_____2_____3_____4_____5_____6_____7

TASKS	COMPETENCY RATINGS		
	Psychiatry	Social Work	Psychology
1. Intake screening	___	___	___
2. Evaluation of psychosocial functioning	___	___	___
3. Administering intelligence tests	___	___	___
4. Administering personality tests	___	___	___
5. Intellectual assessment	___	___	___
6. Personality assessment	___	___	___
7. Making diagnosis	___	___	___
8. Individual counselling	___	___	___
9. Individual psychotherapy	___	___	___
10. Group counselling	___	___	___
11. Group psychotherapy	___	___	___
12. Family counselling	___	___	___
13. Family psychotherapy	___	___	___
14. Crisis intervention	___	___	___
15. Medication management	___	___	___
16. Testifying as an expert witness in court	___	___	___
17. Leading an interdisciplinary mental health team	___	___	___
18. Making staffing decisions	___	___	___
19. Supervising/training individuals in the same mental health profession	___	___	___
20. Supervising/training individuals in other mental health professions	___	___	___
21. Conducting research	___	___	___

PART G: EDUCATION/QUALIFICATIONS

INSTRUCTIONS: Use the scale printed below and indicate your responses to the questions that follow by writing your number ratings in the spaces provided.

```
    0%                                                              100%
  ACCURACY                                                        ACCURACY
     0____1____2____3____4____5____6____7____8____9____10
```

Given what you know right now, how accurately could you describe the educational background, training, and professional qualifications that an individual must have in order to:

1. Practice as a PSYCHIATRIST in the Province of Ontario? _____

2. Practice as a SOCIAL WORKER in the Province of Ontario? _____

3. Practice as a PSYCHOLOGIST in the Province of Ontario? _____

PART H: OVERALL RATINGS

1. Personally, I have liked every mental health professional I have ever met.

   True _____ False _____ (check one)

2. Personally, I have never had any doubts about the competence of any

   of the mental health professionals I have met.

   True _____ False _____ (check one)

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

MENTAL HEALTH PROFESSIONALS SURVEY

Request for Summary of Research Results

    Yes, I would like a written summary of the results of this research on completion of the study. I understand that the anticipated completion date for the study is May, 1991, and that only group results, not individual data, will be provided in the summary. Please send the summary to me at the address below.

Name: _____

Street Address: _____

City/Province: _____

Postal Code: _____

DETACH THIS FORM FROM THE BOOKLET

RETURN YOUR COMPLETED QUESTIONNAIRES AND THIS FORM SEPARATELY

CONSENT FORM

Research Study on Personality and Attitudes
Toward Mental Health Professionals

My name is Mary Donaghy, I am a Ph.D. student at the University of Windsor, and my research supervisor is Dr. Cheryl Thomas. As part of my degree requirements, I am conducting a study on the relationships between certain aspects of personality and attitudes toward mental health professions.

Participation in this study is completely voluntary. If you agree to participate, you will be asked to complete two questionnaires. The first questionnaire will ask you questions about your educational background and experiences and your opinions and attitudes about social work, psychology, and psychiatry. The second questionnaire will ask you about your attitudes toward yourself.

The questionnaires will take approximately 60-90 minutes to complete.

You may receive feedback on the results of the study by indicating your wish to do so in the space provided at the end of the questionnaire.

If you agree to participate in this research project, your rights will be protected in the following ways:

1. The information you provide will remain confidential and will not be identified with you in any way.

2. The information you provide will be used for research purposes only.

3. You will not be asked to do or to reveal anything that will be harmful to you in any way.

4. You may discontinue your participation in the study at any time without suffering any consequences.

5. This study has been reviewed and approved by the Ethics Committee of the University of Windsor's Psychology Department.

6. You may report any complaint you have regarding any procedure that you believe violates your welfare, to the University of Windsor, Office of Research Services ([519] 253-4232, Ext. 3916) for referral to the Ethics Committee.

7. Questions regarding the research itself may be directed either to Mary Donaghy at ([519] 972-3894) or to Dr. Cheryl Thomas at ([519] 253-4232, Ext. 2252).

I have read the above information, understand it, and agree to participate in this study.

Signature _____   Date _____

PLEASE RETURN THIS COPY WITH YOUR QUESTIONNAIRE

APPENDIX B

I. Attitude and experience differences between students in

B.S.W. and M.S.W. programmes

APPENDIX B

Attitude and Experience Differences Between Students in

B.S.W. and M S.W. Programmes

B.S.W. and M.S.W. social work students were compared on
all study variables. Significant differences between the
two groups are reported below.

Prior Work Involvement with Mental Health Professionals

Students in M.S.W. programmes reported significantly
more work-related involvement with psychologists [$F_{(1,67)}$ =
14.5, $p < .001$], psychiatrists [$F_{(1,67)}$ = 9.5, $p < .01$], and
social workers [$F_{(1,67)}$ = 10.9, $p < .01$] prior to entering
their current programme of study than students in B.S.W.
programmes. M.S.W. students' mean contact ratings with
psychologists, psychiatrists, and social workers were 2.2
(SD = 2.1), 1.6 (SD = 2.1), and 3.7, (SD = 2.5)
respectively. B.S.W. students' mean contact ratings with
psychologists, psychiatrists, and social workers were 0.6
(SD = 1.3), 0.5 (SD = 1.0), and 1.7 (SD = 2.3) respectively.

Postsecondary Education

Respondents in M.S.W. programmes reported more years of
postsecondary education (M = 4.9 yr, SD = 1.5) than students
in B.S.W. programmes (M = 3.3 yr, SD = 2.1) [$F_{(1,65)}$ = 10.0,
$p < .01$].

Interdisciplinary Contact

M.S.W. students reported more frequent interdisciplinary contact with psychiatrists (M = 1.4, SD = 1.2) than did B.S.W. students (M = 0.7, SD = 0.7) [$F_{(1,67)}$ = 8.9, p < .01]. M.S.W. students also reported more frequent contact with social workers (M = 5.6, SD = 1.5) than did B.S.W. students (M = 4.7, SD = 1.4) [$F_{(1,67)}$ = 7.2, p < .01].

Perceived Personality Attributes

B.S.W. students rated psychiatrists as more agreeable (M = 4.0, SD = 1.2) than M.S.W. students did (M = 3.2, SD = 1.2) [$F_{(1,65)}$ = 6.1, p < .05]; and M.S.W. students rated social workers as more agreeable (M = 6.0, SD = 0.7) than did B.S.W. students (M = 5.4, SD = 0.8) [$F_{(1,65)}$ = 6.8, p < .05].

Clinical Task Competence

B.S.W. students rated social workers as more competent at group counselling (M = 6.5, SD = 0.7) than M.S.W. students did (M = 6.0, SD = 1.0) [$F_{(1,66)}$ = 5.7, p < .05]. B.S.W. students also rated psychiatrists as more competent at medication management (M = 6.4, SD = 1.1) than did M.S.W. students (M = 5.7, SD = 1.4) [$F_{(1,66)}$ = 5.0, p < .05].

B.S.W. students rated social workers as more competent to testify as expert witnesses in court (M = 6.1, SD = 0.9) than did M.S.W. students (M = 5.4, SD = 1.4) [$F_{(1,65)}$ = 6.3, p < .05].

M.S.W. students rated psychologists (M = 4.7, SD = 1.7) [$F(1,65)$ = 5.8, p < .05] and social workers (M = 4.7, SD = 1.7) [$F(1,65)$ = 5.0, p < .05] as more competent to supervise individuals in other mental health professions than did B.S.W. students (M = 3.6, SD = 1.7; M = 3.7, SD = 2.0, respectively).

B.S.W. students rated psychiatrists as better researchers (M = 5.8, SD = 1.4) than did M.S.W. students (M = 4.7, SD = 1.5) [$F(1,65)$ = 9.6, p < .01].

PRF-E Self-ratings

M.S.W. students scored significantly higher on self-ratings of dominance (M = 9.5, SD = 3.7) than did B.S.W. students (M = 7.6, SD = 3.7) [$F(1,64)$ = 4.1, p < .05].

APPENDIX C

MHPQ Part A: Background Information

I. Reasons given for selecting a particular mental
    health profession

II. Postsecondary education

APPENDIX C

Reasons Given for Selecting a Particular Mental Health

Profession

Respondents indicated their reasons for selecting one

mental health p: ^fession over the others. The first three

reasons listed by each respondent were sorted into eight

categories: (1) Economic/Financial (e.g., "It [social work]

required less education (time and money)."); (2)

Status/prestige (e.g., "Social work seemed too "easy" and

not so much status professionally."; (3) Philosophical

(e.g., "It's emphasis on the social aspect of individuals -

that mental health problems occur within a social

context".); (4) Inability to enter/pass admission criteria

for other professions (e.g., "Because I don't have the marks

to get into Psychiatry...".); (5) Interest (e.g., "I thought

it would be an interesting field to pursue".); (6) Personal

(e.g., "Always respected M.S.W.'s and wanted to be one".);

(7) Already a physician (e.g., "I chose psychiatry during my

medical training, so it seemed appropriate to work in the

mental health field related to my M.D. - rather than get my

M.D. and start from scratch in either psychology or social

work".); (8) Nonspecific (e.g., "I wanted to perform

psychotherapy. I felt that this would be the best way to do

this.", "Have been in nursing x 15 years - need a change".).

Table C.1 shows the frequencies for each response category.

APPENDIX C

Table C.1

Reasons for Entering Profession - Frequencies by Group

	Clinical Psychology Students ($\underline{n}$ = 68)	Psychiatry Residents ($\underline{n}$ = 24)	Social Work Students ($\underline{n}$ = 69)
Economic/financial	5	2	17
Status, prestige	5	0	0
Philosophical	38	4	34
Inability to enter/pass admission criteria for other professions	5	0	5
Interest in profession	57	8	7
Already a physician	0	20	0
Personal reasons	?ь	5	12
Nonspecific/other	3	2	16

Among clinical psychology students, the three most commonly given reasons for selecting a career in clinical psychology were interest in the profession, philosophical, and personal. Psychiatric residents were most likely to cite prior training as a physician, interest in the profession, and personal reasons for choosing psychiatry. Social work students most commonly reported that they had selected their current discipline for philosophical, economic/financial, and nonspecific/other reasons.

Postsecondary Education

Respondents indicated the postsecondary degrees, diplomas, or certificates obtained prior to entering their current training programme. Among clinical psychology students, the most common previous degrees were Honours B.A., M.A., and Honours B.Sc. Among psychiatric residents, the most common prior degrees were M.D. or equivalent, Honours B.A., and "Other Degree". Only half of the social work students reported previous degrees; the Honours B.A., three year B.A., and "Other Diploma" were the most common prior degrees/diplomas. Table C.2 lists the degrees, diplomas, and certificates reported by respondents in each group.

Respondents also indicated the academic area of specialization for each previously-obtained degree, certificate, or diploma. The most common areas of specialization among clinical psychology students were

APPENDIX C

Table C.2

Postsecondary Degrees, Diplomas, and Certificates Obtained Prior to Entering

Current Training Programme

	Clinical Psychology Students (n = 66)	Psychiatric Residents (n = 23)	Social Work Students (n = 34)
Degree			

Degree			
Honours B.A.	51	7	18
Honours B.Sc.	11	2	0
Three Year B.A.	2	0	6
Three Year B.Sc.	0	1	0
M.A.	27	1	0
M. Sc.	4	2	2
M. Ed.	4	1	0
M.D. (or equivalent)	0	24	0
Bachelor's of Theology	1	0	0
R.N.A.	0	0	3
Teaching Certificate	0	0	1
Other Degree	1	3	2
Other Diploma	8	1	10
Other Certificate	0	0	6

----

psychology, clinical or counselling psychology, and "other".
Among psychiatric residents, the three most common areas of
specialization were medicine, "other", and psychiatry.
Social work students most commonly reported prior
specialization in psychology, "other", and nursing. Table
C.3 lists the frequencies for reported areas of degree,
diploma, or certificate specialization by group.

APPENDIX C

Table C.3

Subject Areas for Degrees, Certificates, and Diplomas Obtained Prior to Entering

Current Programme

	Clinical Psychology Students ($\underline{n}$ = 66)	Psychiatric Residents ($\underline{n}$ = 22)	Social Work Students ($\underline{n}$ = 35)
Psychology	68	2	1?
Clinical or Counselling Psychology	13	0	0
Counselling	3	0	0
Education	2	1	3
Medicine	0	24	0
Psychiatry	0	3	0
Nursing	3	0	4
Social or Life Sciences	2	1	3
Social Work	0	0	3
Gerontology	0	0	1
Other[a]	8	14	17

[a] "Other" refers to subject areas other than the behavioural sciences

(e.g., Economics, Political Science etc.).

APPENDIX D

MHPQ Part B: Current Programme of Study/Training

I.   Current Degrees

II. Clinical Experiences

APPENDIX D

Part B: Current Programme of Study/Training

Current Degrees

Four respondents were working toward M.A. degrees, 64 toward Ph.D. degrees, 24 toward certification as psychiatrists, 44 toward B.S.W. degrees, and 25 toward M.S.W. degrees. Clinical psychology students, psychiatric residents, and social work students had been enrolled in their current programmes for a mean of 2.2 yrs. (SD = 1.9), 1.5 yrs. (SD = 1.4), and 1.1 yrs. (SD = 1.5), respectively. Clinical psychology students reported that a mean of 4.0 yrs. (SD = 0.2) was required to earn an undergraduate degree in psychology, and 6.0 yrs. (SD = 1.3) for a Ph.D. degree. Psychiatric residents reported that a mean of 5.8 yrs. (SD = 1.7) was required to earn an undergraduate medical degree, and 4.7 yrs. (SD = 1.3) to become a licensed psychiatrist. Social work students reported that a mean of 3.8 yrs. (SD = 0.4) were required to earn a B.S.W. degree and a mean of 2.0 yrs. (SD = 1.1) to obtain an M.S.W. degree.

Clinical Experiences

Of the 154 programme related clinical experiences reported by clinical psychology students, 85 were practicum experiences, 58 were internships, and 11 were classified as "other" positions. Clinical psychology students spent a mean of 19.8 hours/week and 28.2 weeks/year in clinical settings. Clinical psychology students had obtained

clinical work experiences in a total of 163 settings (M = 2.3): 111 (68%) of these settings were in locations where contact with other mental health professionals was highly probable (e.g., a psychiatric hospital), 51 (31%) were in locations where there was the possibility of contact with other mental health professionals (e.g., Board of Education) and 1 (1%) was in a location where there was a low probability of contact with other mental health professionals (e.g., working in a church).

Of the 59 programme-related clinical experiences reported by the psychiatric residents, 46 were residencies, 6 were internships, and 7 were classified as "other" positions. Psychiatric residents spent a mean of 57.3 hours/week and 46.1 weeks/year in clinical settings. Psychiatric residents had worked in a total of 56 settings (M = 2.5): 54 (96%) of these settings were in locations where contact with other mental health professions was highly probable and 2 (4%) were in locations where there was a possibility of contact with other mental health professionals.

Of the 41 clinical experiences reported by social work students (M = .7), 24 were practicum positions, 8 were internships, and 9 were "other" positions (e.g., student social worker). Social work students spent a mean of 17.7 hours/week and 23.6 weeks/year in clinical settings. Social work students had worked in a total of 49 clinical settings:

6 (12%) of the settings were in locations where contact with other mental health professionals was highly probable, and 43 (88%) were in locations where contact with the other mental health professions was possible but not probable.

APPENDIX E

MHPQ Part C: Interdisciplinary Interactions

Group Means and Standard Deviations for Amount of

Reported Interdisciplinary Interaction with

Mental Health Professionals

Table E.1   Means (and standard deviations) for amount of
             interdisciplinary interaction with
             professionals as reported by clinical
             psychology students

Table E.2   Means (and standard deviations) for amount of
             interdisciplinary interaction with
             professionals as reported by psychiatric
             residents

Table E.3   Means (and standard deviations) for amount of
             interdisciplinary interaction with
             professionals as reported by social
             work students

APPENDIX E

Table E.1

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Professionals as Reported by Clinical Psychology Students (n = 68)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Attend classes or seminars	5.6 (2.1)	1.3 (0.8)	1.3 (0.7)
Attend clinical supervision meetings	5.3 (2.6)	1.3 (1.0)	1.3 (0.9)
Perform clinical tasks that involve client/patient contact	4.7 (2.6)	1.6 (1.3)	1.6 (1.2)
Discuss clinical issues or problems with others	5.7 (2.1)	1.6 (1.3)	1.6 (1.2)
Attend meetings related to clinical work	4.8 (2.7)	1.9 (1.9)	2.0 (1.9)
Perform research-related tasks	5.1 (2.3)	1.2 (0.6)	1.0 (0.2)
Perform administrative tasks	4.1 (2.7)	1.2 (0.8)	1.4 (1.1)

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[a] higher means reflect more interdisciplinary contact

APPENDIX E

Table E.2

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Professionals as
Reported by Psychiatric Residents (n = 24)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Attend classes or seminars	2.0 (1.5)	6.7 (0.9)	1.6 (1.4)
Attend clinical supervision meetings	1.7 (1.1)	6.1 (1.9)	2.0 (1.8)
Perform clinical tasks that involve client/patient contact	2.3 (1.5)	6.8 (0.5)	3.0 (1.9)
Discuss clinical issues or problems with others	2.8 (1.7)	6.6 (1.1)	3.3 (1.8)
Attend meetings related to clinical work	3.2 (1.9)	6.3 (1.5)	3.7 (1.9)
Perform research-related tasks	1.8 (1.4)	4.3 (2.8)	1.2 (0.7)
Perform administrative tasks	2.5 (2.0)	4.8 (2.6)	2.3 (1.9)

[a] higher means reflect more interdisciplinary contact

APPENDIX E

Table E.3

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Professionals as Reported by Social Work Students (n = 69)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Attend classes or seminars	1.9 (1.5)	1.1 (0.6)	5.8 (1.5)
Attend clinical supervision meetings	1.1 (0.8)	1.1 (0.7)	3.7 (2.9)
Perform clinical tasks that involve			
client/patient contact	1.3 (0.9)	1.2 (0.8)	3.6 (2.7)
Discuss clinical issues or problems			
with others	1.6 (1.3)	1.3 (1.0)	4.3 (2.3)
Attend meetings related to clinical			
work	1.5 (1.3)	1.4 (1.2)	3.5 (2.6)
Perform research-related tasks	1.5 (1.3)	1.2 (0.7)	3.3 (2.2)
Perform administrative tasks	1.3 (1.2)	1.2 (0.9)	3.2 (2.5)

[a] higher means reflect more interdisciplinary contact

APPENDIX F

Group Means and Standard Deviations for Amount of

Reported Interdisciplinary Interaction with Mental Health

Professionals-in-Training

Table F.1   Means (and standard deviations) for amount of
             interdisciplinary interaction with mental
             health professionals-in-training as reported
             by clinical psychology students

Table F.2   Means (and standard deviations) for amount of
             interdisciplinary interaction with mental
             health professionals-in-training as reported
             by psychiatric residents

Table F.3   Means (and standard deviations) for amount of
             interdisciplinary interaction with mental
             health professionals-in-training as reported
             by social work students

APPENDIX F

Table F.1

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Mental

Health Professionals-in-Training as Reported by Clinical Psychology Students (n = 68)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Attend classes or seminars	6.7 (0.8)	1.1 (0.5)	1.3 (0.8)
Attend clinical supervision meetings	4.3 (2.6)	1.2 (0.7)	1.1 (0.4)
Perform clinical tasks that involve			
client/patient contact	4.2 (2.6)	1.5 (1.1)	1.4 (0.9)
Discuss clinical issues or problems			
others	6.1 (1.4)	1.4 (1.0)	1.4 (1.0)
Attend meetings related to clinical			
work	5.3 (2.4)	1.8 (1.5)	1.6 (1.3)
Perform research-related tasks	5.3 (2.1)	1.0 (0.0)	1.0 (0.0)
Perform administrative tasks	4.8 (2.4)	1.0 (0.0)	1.0 (0.0)

[a] higher means reflect more interdisciplinary contact

APPENDIX F

Table F.2

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Mental

Health Professionals-in-Training as Reported by Psychiatric Residents (n = 24)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Attend classes or seminars	1.9 (1.3)	6.6 (0.9)	1.2 (0.8)
Attend clinical supervision meetings	1.1 (0.6)	5.9 (1.8)	1.1 (0.6)
Perform clinical tasks that involve			
client/patient contact	1.5 (1.0)	5.9 (1.9)	1.8 (1.5)
Discuss clinical issues or problems			
others	1.8 (1.4)	6.2 (1.4)	1.7 (1.3)
Attend meetings related to clinical			
work	2.0 (1.5)	5.9 (1.7)	2.0 (1.7)
Perform research-related tasks	1.6 (1.4)	5.2 (2.5)	1.0 (0.4)
Perform administrative tasks	1.1 (0.4)	5.6 (2.3)	1.3 (0.9)

[a] higher means reflect more interdisciplinary contact

APPENDIX F

Table F.3

Means (and Standard Deviations) for Amount of Interdisciplinary Interaction with Mental
Health Professionals-in-Training as Reported by Social Work Students (n = 69)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Attend classes or seminars	2.6 (2.1)	1.2 (1.0)	6.6 (1.2)
Attend clinical supervision meetings	1.3 (0.9)	1.3 (1.3)	4.1 (2.8)
Perform clinical tasks that involve			
client/patient contact	1.8 (1.7)	1.4 (1.3)	4.3 (2.6)
Discuss clinical issues or problems			
others	2.2 (1.8)	1.3 (1.1)	5.6 (1.9)
Attend meetings related to clinical			
work	1.8 (1.7)	1.3 (1.2)	3.8 (2.5)
Perform research-related tasks	2.0 (1.8)	1.1 (0.3)	4.9 (2.1)
Perform administrative tasks	2.0 (2.0)	1.3 (1.1)	4.1 (2.5)

[a] higher means reflect more interdisciplinary contact

APPENDIX G

Group Means and Standard Deviations for Amount of Reported

Personal Contact with Mental Health Professionals

and Professionals-in-Training

Table G.1   Means (and standard deviations) for amount of

personal contact with mental health

professionals and professionals-in-training

as reported by clinical psychology students

Table G.2   Means (and standard deviations) for amount of

personal contact with mental health

professionals and professionals-in-training

as reported by psychiatric residents

Table G.3   Means (and standard deviations) for amount of

personal contact with mental health

professionals and professionals-in-training

as reported by social work students

APPENDIX G

Table G.1

Means (and Standard Deviations) for Amount of Personal Contact with Mental Health Professionals
and Professionals-in-Training as Reported by Clinical Psychology Students (n = 67)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Number of friends who are			
practicing professionals	3.7 (4.3)	0.2 (0.6)	1.1 (1.5)
Number of friends who are			
professionals-in-training	9.4 (5.7)	0.1 (0.4)	0.4 (0.9)

[a] higher means reflect more personal contact

APPENDIX G

Table G.2

Means (and Standard Deviations) for Amount of Personal Contact with Mental Health Professionals
and Professionals-in-Training as Reported by Psychiatric Residents (n = 22)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Number of friends who are practicing professionals	1.4 (1.3)	5.4 (4.5)	2.6 (6.3)
Number of friends who are professionals-in-training	0.3 (0.8)	5.5 (4.1)	1.2 (3.5)

[a] higher means reflect more frequent personal contact

APPENDIX G

Table G.3

Means (and Standard Deviations) for Amount of Personal Contact with Mental Health Professionals and Professionals-in-Training as Reported by Social Work Students (n = 67)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Number of friends who are			
practicing professionals	1.2 (2.2)	0.4 (1.6)	3.2 (4.2)
Number of friends who are			
professionals-in-training	2.7 (5.6)	0.0 (0.1)	9.0 (10.4)

[a] higher means reflect frequent personal contact

APPENDIX H

Group Means and Standard Deviations for Perceived

Personality Attributes of Mental Health Professionals

APPENDIX H

Table H.1

Means (and Standard Deviations) for Personality Attributes of Mental Health

Professionals as Rated by Clinical Psychology Students (n = 66)[a]

. . . .

	Profession Rated		
	Psychology	Psychiatry	Social Work

. . . .

	Psychology	Psychiatry	Social Work
Conscientiousness			
Conscientious-negligent	6.0 (0.8)	5.0 (1.1)	5.7 (1.0)
Dependable-undependable	5.7 (1.0)	5.0 (1.3)	5.4 (1.1)
Scrupulous-unscrupulous	5.5 (1.1)	4.6 (1.4)	5.2 (1.2)
Emotional Stability			
Calm-excitable	5.0 (1.1)	5.3 (1.1)	4.5 (1.2)
Relaxed-tense	4.6 (1.1)	3.8 (1.3)	4.6 (1.2)
Culture			
Sensitive-insensitive	5.6 (1.1)	3.9 (1.3)	5.5 (1.1)
Open-minded-narrow-minded	5.2 (1.4)	3.0 (1.5)	4.8 (1.5)
Leadership Ability			
Effective-ineffective	4.8 (1.7)	4.4 (1.3)	4.7 (1.4)
Decisive-indecisive	4.9 (1.2)	5.9 (1.1)	4.6 (1.3)
Agreeableness			
Friendly-unfriendly	5.4 (1.1)	3.9 (1.3)	5.8 (1.0)
Cooperative-uncooperative	5.2 (1.4)	3.7 (1.4)	5.2 (1.4)
Unassuming-arrogant	4.1 (1.2)	2.0 (1.0)	4.9 (1.1)
Extraversion			
Outgoing-reserved	4.3 (1.4)	3.2 (1.4)	5.0 (1.4)
Confident-tentative	5.1 (1.2)	6.2 (0.9)	4.8 (1.3)
Open-secretive	4.7 (1.2)	3.3 (1.5)	5.2 (1.2)

. . . .

[a] higher means reflect more positive ratings

APPENDIX H

Table H.2

Means (and Standard Deviations) for Personality Attributes of Mental Health

Professionals as Rated by Psychiatric Residents (n = 20)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Conscientiousness			
Conscientious-negligent	6.0 (1.0)	6.0 (1.0)	5.9 (1.1)
Dependable-undependable	5.8 (1.1)	5.8 (1.2)	5.8 (1.1)
Scrupulous-unscrupulous	5.4 (1.1)	5.3 (1.3)	5.3 (1.0)
Emotional Stability			
Calm-excitable	5.2 (0.9)	5.3 (1.1)	4.4 (1.4)
Relaxed-tense	5.0 (1.6)	4.6 (1.8)	4.9 (1.5)
Culture			
Sensitive-insensitive	5.6 (1.3)	5.7 (1.1)	5.7 (1.3)
Open-minded-narrow-minded	4.1 (1.6)	4.2 (1.6)	4.2 (1.6)
Leadership Ability			
Effective-ineffective	5.1 (1.4)	5.1 (1.9)	5.3 (1.3)
Decisive-indecisive	4.8 (1.1)	5.8 (1.0)	4.7 (1.3)
Agreeableness			
Friendly-unfriendly	5.0 (1.4)	4.9 (1.3)	5.2 (1.4)
Cooperative-uncooperative	5.6 (1.4)	5.5 (1.4)	5.4 (1.7)
Unassuming-arrogant	3.8 (1.3)	3.5 (1.3)	4.4 (0.9)
Extraversion			
Outgoing-reserved	4.3 (1.5)	4.0 (1.5)	5.1 (0.9)
Confident-tentative	5.1 (1.3)	5.9 (0.9)	4.8 (1.1)
Open-secretive	4.6 (1.7)	4.6 (1.6)	5.3 (1.0)

[a] higher means reflect more positive ratings

APPENDIX H

Table H.3

Means (and Standard Deviations) for Personality Attributes of Mental Health

Professionals as Rated by Social Work Students (n = 67)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Conscientiousness			
Conscientious-negligent	5.6 (1.2)	4.9 (1.7)	6.0 (1.2)
Dependable-undependable	5.7 (1.3)	5.4 (1.5)	5.9 (1.2)
Scrupulous-unscrupulous	4.9 (1.5)	4.8 (1.6)	5.0 (1.7)
Emotional Stability			
Calm-excitable	5.1 (1.5)	5.7 (1.5)	4.9 (1.6)
Relaxed-tense	5.0 (1.2)	4.4 (1.5)	5.3 (1.3)
Culture			
Sensitive-insensitive	5.2 (1.3)	4.1 (1.7)	6.2 (0.9)
Open-minded-narrow-minded	4.3 (1.7)	3.2 (1.7)	5.4 (1.6)
Leadership Ability			
Effective-ineffective	4.6 (1.7)	4.3 (1.8)	4.7 (1.9)
Decisive-indecisive	5.0 (1.4)	5.3 (1.7)	4.5 (1.6)
Agreeableness			
Friendly-unfriendly	5.3 (1.2)	3.9 (1.6)	6.2 (0.9)
Cooperative-uncooperative	4.7 (1.5)	4.3 (1.6)	5.2 (1.7)
Unassuming-arrogant	4.3 (1.3)	2.9 (1.6)	5.5 (1.2)
Extraversion			
Outgoing-reserved	3.8 (1.3)	3.0 (1.7)	4.9 (1.6)
Confident-tentative	5.7 (1.1)	6.0 (1.3)	5.3 (1.4)
Open-secretive	4.5 (1.6)	3.1 (1.7)	5.4 (1.6)

[a] higher means reflect more positive ratings

APPENDIX I

Means and Standard Deviations for Clinical Task Competency

of Mental Health Professionals

Table I.1   Means (and standard deviations) for clinical
              task competency of mental health
              professionals as rated by clinical
              psychology students

Table I.2   Means (and standard deviations) for clinical
              task competency of mental health
              professionals as rated by psychiatric
              residents

Table I.3   Means (and standard deviations) for clinical
              task competency of mental health
              professionals as rated by social work
              students

APPENDIX I

Table I.1

Means (and Standard Deviations) for Clinical Task Competency of Mental Health Professionals
as Rated by Clinical Psychology Students (n = 68)[a]

	Profession Rated		
	Psychology	Psychiatry	Social Work
Intake Screening	6.0 (1.0)	5.4 (1.3)	5.2 (1.5)
Evaluation of Psychosocial Functioning	6.0 (0.8)	4.4 (1.4)	5.5 (1.2)
Administering Intelligence Tests	6.5 (0.9)	2.1 (1.4)	1.9 (1.2)
Administering Personality Tests	6.4 (0.9)	2.7 (1.7)	2.2 (1.4)
Intellectual Assessment	6.5 (0.6)	3.0 (1.5)	2.5 (1.3)
Personality Assessment	6.2 (0.8)	3.7 (1.5)	2.8 (1.3)
Making Diagnoses	5.4 (1.0)	5.5 (1.2)	3.2 (1.5)
Individual Counselling	6.1 (0.8)	4.3 (1.6)	5.2 (1.3)
Individual Psychotherapy	6.1 (0.7)	4.3 (1.6)	4.1 (1.7)
Group Counselling	5.8 (0.9)	3.7 (1.6)	5.1 (1.4)
Group Psychotherapy	5.9 (1.0)	3.9 (1.7)	4.5 (1.6)
Family Counselling	5.6 (1.0)	3.4 (1.6)	5.4 (1.4)
Family Psychotherapy	5.7 (1.1)	3.5 (1.8)	4.8 (1.7)
Crisis Intervention	5.6 (0.9)	4.9 (1.5)	5.0 (1.5)
Medication Management	2.4 (1.5)	6.0 (1.0)	1.8 (1.1)
Testifying as an Expert Witness in Court	5.2 (1.4)	4.9 (1.6)	3.8 (1.7)
Leading an Interdisciplinary Mental Health Team	5.8 (1.2)	5.1 (1.5)	4.5 (1.6)
Making Staffing Decisions	5.4 (1.3)	4.9 (1.5)	4.8 (1.4)
Supervision/training Individuals in Same Mental Health Profession	6.1 (0.8)	5.8 (1.2)	5.9 (1.0)
Supervision/training of Other Mental Health Professionals	3.8 (1.8)	3.1 (1.6)	3.1 (1.6)
Conducting Research	6.3 (0.6)	2.9 (1.6)	2.7 (1.5)

[a] higher means reflect higher competency ratings

APPENDIX I

Table 1.2

Means (and Standard Deviations) for Clinical Task Competency of Mental Health Professionals
as Rated by Psychiatric Residents (n = 21)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Intake Screening	5.1 (1.6)	6.0 (1.0)	5.3 (1.3)
Evaluation of Psychosocial Functioning	5.3 (1.3)	5.6 (1.2)	5.6 (1.3)
Administering Intelligence Tests	6.9 (0.4)	2.7 (1.6)	2.2 (1.1)
Administering Personality Tests	6.8 (0.4)	2.7 (1.7)	2.2 (1.4)
Intellectual Assessment	6.4 (0.8)	5.0 (1.2)	3.4 (1.2)
Personality Assessment	5.9 (1.0)	5.7 (1.0)	3.8 (1.2)
Making Diagnoses	4.7 (1.6)	6.4 (0.6)	3.7 (1.3)
Individual Counselling	5.7 (1.0)	6.0 (1.0)	5.4 (1.3)
Individual Psychotherapy	5.7 (0.9)	6.1 (0.9)	4.7 (1.3)
Group Counselling	5.5 (1.2)	5.3 (1.5)	5.4 (1.1)
Group Psychotherapy	5.3 (1.3)	5.2 (1.6)	5.2 (1.1)
Family Counselling	5.4 (1.2)	5.6 (1.1)	5.7 (1.0)
Family Psychotherapy	5.2 (1.2)	5.7 (1.1)	5.3 (1.2)
Crisis Intervention	4.7 (1.4)	6.2 (0.8)	5.0 (1.3)
Medication Management	1.5 (1.1)	6.8 (0.4)	1.3 (0.8)
Testifying as an Expert Witness in Court	4.9 (1.6)	5.9 (1.1)	4.4 (1.9)
Leading an Interdisciplinary Mental Health Team	4.5 (1.8)	6.0 (0.9)	4.2 (1.7)
Making Staffing Decisions	5.1 (1.4)	5.5 (1.1)	4.9 (1.5)
Supervision/training Individuals in Same Mental Health Profession	6.3 (0.8)	6.3 (0.8)	6.1 (1.2)
Supervision/training of Other Mental Health Professionals	4.3 (1.4)	4.5 (1.6)	4.1 (1.6)
Conducting Research	6.3 (1.0)	5.6 (1.3)	4.7 (1.8)

[a] higher means reflect higher competency ratings

APPENDIX I

Table 1.3

Means (and Standard Deviations) for Clinical Task Competency of Mental Health Professionals
as Rated by Social Work Students (n = 68)[a]

| | Profession Rated | | |
	Psychology	Psychiatry	Social Work
Intake Screening	5.5 (1.1)	5.1 (1.5)	6.0 (1.0)
Evaluation of Psychosocial Functioning	5.6 (1.2)	4.8 (1.6)	5.9 (1.0)
Administering Intelligence Tests	6.1 (1.1)	5.4 (1.6)	3.7 (1.9)
Administering Personality Tests	6.2 (1.1)	5.6 (1.5)	4.1 (1.9)
Intellectual Assessment	6.0 (0.9)	5.5 (1.3)	4.7 (1.5)
Personality Assessment	5.7 (1.1)	5.3 (1.5)	5.3 (1.4)
Making Diagnoses	5.2 (1.2)	5.4 (1.4)	4.9 (1.4)
Individual Counselling	5.5 (1.3)	4.8 (1.8)	6.3 (0.8)
Individual Psychotherapy	5.4 (1.5)	5.4 (1.6)	4.8 (1.5)
Group Counselling	5.3 (1.4)	4.1 (1.7)	6.3 (0.9)
Group Psychotherapy	5.2 (1.5)	4.8 (1.8)	4.8 (1.6)
Family Counselling	5.1 (1.3)	3.9 (1.6)	6.3 (0.8)
Family Psychotherapy	5.0 (1.6)	4.7 (1.7)	4.9 (1.6)
Crisis Intervention	5.1 (1.4)	4.4 (1.8)	6.4 (0.8)
Medication Management	3.1 (1.7)	6.1 (1.3)	2.7 (1.5)
Testifying as an Expert Witness in Court	5.6 (1.3)	5.8 (1.4)	5.9 (1.2)
Leading an Interdisciplinary Mental Health Team	5.6 (1.1)	5.3 (1.6)	5.6 (1.4)
Making Staffing Decisions	5.8 (1.2)	5.2 (1.6)	6.0 (1.0)
Supervision/training Individuals in Same Mental Health Profession	6.1 (0.9)	5.8 (1.3)	6.1 (1.0)
Supervision/training of Other Mental Health Professionals	4.0 (1.8)	3.6 (1.7)	4.0 (1.9)
Conducting Research	6.0 (1.2)	5.4 (1.5)	5.4 (1.5)

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[a] higher means reflect higher competency ratings

APPENDIX J

Correlations Among Assessment and Treatment Ratings

Table J.1   Correlations of psychologists' assessment
            competency ratings

Table J.2   Correlations of psychologists' treatment
            competency ratings

Table J.3   Correlations of psychiatrists' assessment
            competency ratings

Table J.4   Correlations of psychiatrists' treatment
            competency ratings

Table J.5   Correlations of social workers' assessment
            competency ratings

Table J.6   Correlations of social workers' treatment
            competency ratings

Table J.1

Correlations of Psychologists' Assessment Competency Ratings

Assessment Tasks	1	2	3	4	5	6	7
Intake Screening (1)	1.00						
Evaluation of Psychosocial Functioning (2)	.55	1.00					
Administering Intelligence Tests (3)	.24	.17	1.00				
Administering Personality Tests (4)	.23	.21	.90	1.00			
Intellectual Assessment (5)	.25	.21	.63	.59	1.00		
Personality Assessment (6)	.29	.24	.43	.42	.55	1.00	
Making Diagnoses (7)	.30	.28	.24	.23	.24	.46	1.00

Table J.2

Correlations of Psychologists' Treatment Competency Ratings

Treatment Tasks	1	2	3	4	5	6	7
Individual Counselling (1)	1.00						
Individual Psychotherapy (2)	.66	1.00					
Group Counselling (3)	.70	.59	1.00				
Group Psychotherapy (4)	.55	.72	.74	1.00			
Family Counselling (5)	.58	.48	.69	.58	1.00		
Family Psychotherapy (6)	.48	.61	.59	.79	.77	1.00	
Crisis Intervention (7)	.50	.44	.54	.57	.48	.49	1.00

Table J.3

Correlations of Psychiatrists' Assessment Competency Ratings

Assessment Tasks	1	2	3	4	5	6	7
Intake Screening (1)	1.00						
Evaluation of Psychosocial Functioning (2)	.41	1.00					
Administering Intelligence Tests (3)	.03	.25	1.00				
Administering Personality Tests (4)	.08	.26	.87	1.00			
Intellectual Assessment (5)	.13	.38	.72	.67	1.00		
Personality Assessment (6)	.19	.49	.46	.53	.67	1.00	
Making Diagnoses (7)	.20	.38	.07	.10	.17	.36	1.00

Table J.4

Correlations of Psychiatrists' Treatment Competency Ratings

Treatment Tasks	1	2	3	4	5	6	7
Individual Counselling (1)	1.00						
Individual Psychotherapy (2)	.78	1.00					
Group Counselling (3)	.66	.59	1.00				
Group Psychotherapy (4)	.60	.70	.76	1.00			
Family Counselling (5)	.70	.61	.80	.70	1.00		
Family Psychotherapy (6)	.68	.74	.70	.87	.79	1.00	
Crisis Intervention (7)	.54	.37	.47	.38	.52	.41	1.00

Table J.5

Correlations of Social Workers' Assessment Competency Ratings

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Assessment Tasks	1	2	3	4	5	6	7

Assessment Tasks	1	2	3	4	5	6	7
Intake Screening (1)	1.00						
Evaluation of Psychosocial Functioning (2)	.40	1.00					
Administering Intelligence Tests (3)	.15	.10	1.00				
Administering Personality Tests (4)	.23	.13	.83	1.00			
Intellectual Assessment (5)	.28	.25	.67	.64	1.00		
Personality Assessment (6)	.30	.29	.49	.53	.76	1.00	
Making Diagnoses (7)	.42	.33	.44	.48	.62	.71	1.00

Table J.6

Correlations of Social Workers' Treatment Competency Ratings

Treatment Tasks	1	2	3	4	5	6	7
Individual Counselling (1)	1.00						
Individual Psychotherapy (2)	.57	1.00					
Group Counselling (3)	.80	.57	1.00				
Group Psychotherapy (4)	.45	.81	.52	1.00			
Family Counselling (5)	.73	.56	.83	.49	1.00		
Family Psychotherapy (6)	.43	.80	.45	.90	.54	1.00	
Crisis Intervention (7)	.60	.35	.71	.27	.58	.20	1.00

APPENDIX K

Pairwise t-tests for Each Task Item

Table K.1   Pairwise comparisons for each competency task
item as rated by clinical psychology
students

Table K.2   Pairwise comparisons for each competency task
item as rated by psychiatric residents

Table K.3   Pairwise comparisons for each competency task
item as rated by social work students

APPENDIX K

Table K.1

Pairwise Comparisons for Each Competency Task Item as Rated by Clinical Psychology Students

Task	Pairwise Comparisons	df	t	p<
Intake Screening	PGY[a] > PKY	66	4.0	.001
	PGY > SW	67	4.6	.001
	PKY = SW	66	< 1	ns
Evaluation of Psychosocial Functioning	PGY > PKY	66	10.2	.001
	PGY > SW	67	3.6	.001
	SW > PKY	66	5.1	.001[b]
Administering Intelligence Tests	PGY > PKY	66	23.2	.001
	PGY > SW	67	26.9	.001
	PKY > SW	66	2.3	.03[b]
Administering Personality Tests	PGY > PKY	66	16.6	.001
	PGY > SW	67	21.5	.001
	PKY > SW	66	3.8	.001[b]
Intellectual Assessment	PGY > PKY	66	16.5	.001
	PGY > SW	67	22.3	.001
	PKY > SW	66	4.7	.001[b]
Personality Assessment	PGY > PKY	66	11.0	.001
	PGY > SW	67	17.6	.001
	PKY > SW	66	6.2	.001[b]
Making Diagnoses	PGY = PKY	66	< 1	ns
	PGY > SW	67	10.8	.001
	PKY > SW	66	10.2	.001[b]
Individual Counselling	PGY > PKY	66	9.1	.001
	PGY > SW	67	4.6	.001
	SW > PKY	66	4.2	.001[b]

APPENDIX K

Table K.1 continues

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Task	Pairwise Comparisons	df	t	$p<$
Individual Psychotherapy	PGY > PKY	66	8.1	.001
	PGY > SW	67	8.9	.001
	PKY = SW	66	< 1	ns
Group Counselling	PGY > PKY	66	10.8	.000
	PGY > SW	67	3.2	.01
	SW > PKY	66	5.4	.001[b]
Group Psychotherapy	PGY > PKY	66	8.8	.001
	PGY > SW	67	5.5	.001
	SW > PKY	66	2.2	.033[b]
Family Counselling	PGY > PKY	66	11.4	.000
	PGY = SW	67	1.2	ns
	SW > PKY	66	7.7	.001[b]
Family Psychotherapy	PGY > PKY	66	10.4	.001
	PGY > SW	67	3.9	.001
	SW > PKY	66	4.2	.001[b]
Crisis Intervention	PGY > PKY	66	3.4	.001
	PGY > SW	67	3.2	.01
	SW = PKY	66	< 1	ns
Medication Management	PKY > PGY	66	17.0	.001
	PGY > SW	67	5.0	.001
	PKY > SW	66	24.4	.001[b]
Testifying as an Expert Witness in Court	PGY > PKY	66	2.1	.03
	PGY > SW	67	7.3	.001
	PKY > SW	66	5.2	.001[b]

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(table continues)

APPENDIX K

Table K.1 continues

Task	Pairwise Comparisons	df	t	$p<$
Leading an Interdisciplinary Mental				
Health Team	PGY > PKY	66	3.8	.001
	PGY > SW	67	6.7	.001
	PKY > SW	66	2.7	.01[b]
Making Staffing Decisions	PGY > PKY	66	4.1	.001
	PGY > SW	67	3.8	.001
	PKY = SW	66	< 1	ns
Supervision/training of Other Mental				
Health Professionals	PGY > PKY	66	4.0	.001
	PGY > SW	67	4.3	.001
	PKY = SW	66	< 1	ns
Conducting Research	PGY > PKY	66	16.2	.001
	PGY > SW	67	19.5	.001
	PKY = SW	66	< 1	ns

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[a] PGY = clinical psychology students

PKY = psychiatric residents

SW = social work students

[b] pairwise t-tests with two-tailed probability values

APPENDIX K

Table K.2

Pairwise Comparisons for Each Competency Task Item as Rated by Psychiatric Residents

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Task	Pairwise Comparisons	df	t	p<
Intake Screening	PKY[a] > PGY	19	2.8	.01
	PKY = SW	19	1.9	ns
	PGY = SW	19	< 1	ns
Evaluation of Psychosocial Functioning	PKY = PGY	19	1.5	ns
	PKY = SW	19	< 1	ns
	PGY = SW	19	< 1	ns
Administering Intelligence Tests	PGY > PKY	19	11.4	.001
	PKY = SW	19	1.8	ns
	PGY > SW	19	18.6	.001[b]
Administering Personality Tests	PGY > PKY	19	9.8	.001
	PKY = SW	19	1.4	ns
	PGY > SW	19	13.2	.001[b]
Intellectual Assessment	PGY > PKY	19	4.5	.001
	PKY > SW	19	4.8	.001
	PGY > SW	19	9.5	.001[b]
Personality Assessment	PKY = PGY	19	< 1	ns
	PKY > SW	19	6.0	.001
	PGY > SW	19	5.1	.001[b]
Making Diagnoses	PKY > PGY	19	4.9	.001
	PKY > SW	19	8.5	.001
	PGY > SW	19	3.4	.01[b]
Individual Counselling	PKY = PGY	19	1.8	ns
	PKY > SW	19	2.1	.03
	PGY = SW	19	1.1	ns

(table continues)

APPENDIX K

Table K.2 continues

Task	Pairwise Comparisons	$\underline{df}$	$\underline{t}$	$\underline{p}<$
Individual Psychotherapy	PKY > PGY	19	2.4	.03
	PKY > SW	19	4.7	.001
	PGY > SW	19	3.1	.01[b]
Group Counselling	PKY = PGY	19	< 1	ns
	PKY = SW	19	< 1	ns
	PGY = SW	19	< 1	ns
Group Psychotherapy	PKY = PGY	19	< 1	ns
	PKY = SW	19	< 1	ns
	PGY = SW	19	< 1	ns
Family Counselling	PKY = PGY	19	1.2	ns
	PKY = SW	19	< 1	ns
	PGY = SW	19	1.0	ns
Family Psychotherapy	PKY > PGY	19	2.4	.03
	PKY = SW	19	1.1	ns
	PGY = SW	19	< 1	ns
Crisis Intervention	PKY > PGY	19	3.9	.001
	PKY > SW	19	4.0	.001
	PGY = SW	19	< 1	ns
Medication Management	PKY > PGY	19	21.0	.001
	PKY > SW	19	29.7	.001
	PGY = SW	19	1.3	ns
Testifying as an Expert Witness in Court	PKY > PGY	19	2.8	.01
	PKY > SW	19	3.4	.01
	PGY > SW	19	2.4	.03[b]

(table continues)

APPENDIX K

Table K.2 continues

Task	Pairwise Comparisons	$\underline{df}$	$\underline{t}$	$\underline{p}<$
Leading an Interdisciplinary Mental Health Team	PKY > PGY	19	4.1	.001
	PKY > SW	19	4.4	.001
	PGY = SW	19	< 1	$\underline{ns}$
Making Staffing Decisions	PKY > PGY	19	2.0	.033
	PKY > SW	19	2.3	.03
	PGY = SW	19	1.7	$\underline{ns}$
Supervision/training of Other Mental Health Professionals	PKY = PGY	19	1.8	$\underline{ns}$
	PKY = SW	19	1.6	$\underline{ns}$
	PGY = SW	19	< 1	$\underline{ns}$
Conducting Research	PGY > PKY	19	2.2	.03
	PKY > SW	19	2.6	.01
	PGY > SW	19	3.5	.01[b]

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[a] PKY = psychiatric residents

PGY = clinical psychology students

SW = social work students

[b] pairwise $\underline{t}$-tests with two-tailed probability values

APPENDIX K

Table K.3

Pairwise Comparisons for Each Competency Task Item as Rated by Social Work Students

Task	Pairwise Comparisons	df	t	$p <$
Intake Screening	$SW^a > PKY$	67	4.8	.001
	$SW > PGY$	67	3.9	.001
	$PGY > PKY$	67	2.8	$.01^b$
Evaluation of Psychosocial Functioning	$SW > PKY$	67	4.8	.001
	$SW > PGY$	67	1.9	.033
	$PGY > PKY$	67	4.3	$.001^b$
Administering Intelligence Tests	$PKY > SW$	66	7.0	.001
	$PGY > SW$	66	10.3	.001
	$PGY > PKY$	66	3.1	$.01^b$
Administering Personality Tests	$PKY > SW$	66	5.7	.001
	$PGY > SW$	66	8.7	.001
	$PGY > PKY$	66	2.6	$.03^b$
Intellectual Assessment	$PKY > SW$	66	4.0	.001
	$PGY > SW$	66	6.2	.001
	$PGY > PKY$	66	3.3	$.01^b$
Personality Assessment	$SW = PKY$	66	< 1	ns
	$PGY > SW$	66	2.2	.03
	$PGY > PKY$	66	2.7	$.01^b$
Making Diagnoses	$PKY > SW$	67	2.6	.01
	$PGY > SW$	67	1.9	.033
	$PGY = PKY$	67	1.8	ns
Individual Counselling	$SW > PKY$	67	6.6	.001
	$SW > PGY$	66	4.6	.001
	$PGY > PKY$	66	2.7	$.01^b$

APPENDIX K

Table K.3 continues

Task	Pairwise Comparisons	df	t	p<
Individual Psychotherapy	PKY > SW	66	2.1	.03
	PGY > SW	66	3.1	.01
	PGY = PKY	67	< 1	ns
Group Counselling	SW > PKY	66	9.7	.001
	SW > PGY	66	6.0	.001
	PGY > PKY	66	5.2	.001[b]
Group Psychotherapy	SW = PKY	66	< 1	ns
	SW = PGY	66	1.7	ns
	PGY = PKY	66	1.5	ns
Family Counselling	SW > PKY	66	10.4	.001
	SW > PGY	66	6.5	.001
	PGY > PKY	66	5.9	.001[b]
Family Psychotherapy	SW = PKY	66	< 1	ns
	SW = PGY	66	< 1	ns
	PGY = PKY	66	1.1	ns
Crisis Intervention	SW > PKY	66	8.1	.001
	SW > PGY	67	6.6	.001
	PGY > PKY	66	3.3	.01[b]
Medication Management	PKY > SW	66	13.4	.001
	PGY > SW	66	2.5	.01
	PKY > PGY	67	11.5	.001[b]
Testifying as an Expert Witness in Court	SW = PKY	66	< 1	ns
	SW = PGY	66	1.5	ns
	PGY = PKY	66	< 1	ns

(table continues)

APPENDIX K

Table K.3 continues

Task	Pairwise Comparisons	df	t	$p<$
Leading an Interdisciplinary Mental				
Health Team	SW = PKY	67	1.6	ns
	SW = PGY	67	< 1	ns
	PGY = PKY	67	1.7	ns
Making Staffing Decisions	SW > PKY	66	4.6	.001
	SW > PGY	66	2.0	.03
	PGY > PKY	66	3.3	.001[b]
Supervision/training of Other Mental				
Health Professionals	SW > PKY	66	3.3	.01
	SW = PGY	66	< 1	ns
	PGY > PKY	66	3.5	.01[b]
Conducting Research	SW = PKY	67	< 1	ns
	PGY > SW	67	3.4	.001
	PGY > PKY	67	2.8	.01[b]

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[a] SW = social work students

  PKY = psychiatric residents

  PGY = clinical psychology students

[b] pairwise t-tests with two-tailed probability values

APPENDIX L

Group Means and Standard Deviations for Reported

Likelihood of Making Referrals

Table L.1   Means (and standard deviations) for reported

likelihood of making referrals for minor

mental health problems

Table L.2   Means (and standard deviations) for reported

likelihood of making referrals for severe

mental health problems

APPENDIX L

Table L.1

Means (and Standard Deviations) for Reported Likelihood of Making Referrals for

Minor Mental Health Problems[a]

Profession	Clinical Psychology Students (n = 67)	Psychiatry Residents (n = 23)	Social Work Students (n = 69)
Psychology	5.7 (1.7)	3.7 (2.0)	3.7 (2.0)
Psychiatry	2.2 (1.6)	3.7 (2.0)	2.1 (1.5)
Social Work	3.1 (1.8)	3.4 (2.0)	5.4 (1.7)

[a] higher means reflect a greater likelihood of making referral

APPENDIX L

Table L.2

Means (and Standard Deviations) for Reported Likelihood of Making Referrals for
Severe Mental Health Problems[a]

Profession	Clinical Psychology Students (n = 67)	Psychiatry Residents (n = 23)	Social Work Students (n = 69)
Psychology	6.4 (1.1)	2.9 (1.9)	5.0 (2.0)
Psychiatry	4.6 (1.9)	6.7 (0.7)	4.8 (2.2)
Social Work	2.5 (1.7)	2.3 (1.6)	4.8 (2.2)

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[a] higher means reflect a greater likelihood of making referral

APPENDIX M

I.   Part H: Social Desirability Check: Overall

ratings of mental health professionals

APPENDIX M

MHPO Part H: Social Desirability Check:

Overall Ratings of Mental Health Professionals

Each respondent was asked to answer true/false to the following two statements: "Personally, I have liked every mental health professional I have ever met" and "Personally, I have never had any doubts about the competence of any of the mental health professionals I have met". These measures were intended to act as a broad gage of respondents' socially desirable response sets.

Three clinical psychology students (4%), 1 psychiatric resident (4%), and 12 social work students (17%), agreed that they had liked every mental health professional that they had ever met [Pearson $\underline{x}^2(4) = 8.8$, $\underline{ns}$.]. [More than one-fifth of the fitted cells are sparse (frequency < 5) and therefore the Pearson $\underline{x}^2$ significance test is suspect.] Three clinical psychology students (4%), 1 psychiatric resident (4%), and 11 social work students (16%) agreed that they had had no doubts about the competence of any mental health professional that they had ever met [Pearson $\underline{x}^2(2) = 6.3$, $\underline{p} < .05$].

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