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RESEARCH ARTICLE

SOCIAL SKILLS TRAINING IN BEHAVIOR THERAPY WITH COLLEGE STUDENTS DIAGNOSED WITH DEPRESSION

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ABSTRACT

The development of depression has been attributable to issues such as interpersonal difficulties and social skills deficits. The current study, developed as a single subject design, aimed at evaluating the effects of social skills training in group behavior therapy with depressed students, comparing the results obtained before and after the intervention and in a follow up, making use of validated instruments for depression and social skills. Among the main results are the remission of the depression diagnose and the increased frequency and diversity of social skills. The sessions' analysis reaffirmed the importance of obtaining reinforcement concerning friendship, love and family relations. The most developed social skills were to express positive and negative feelings, asking for behavior change, dealing with criticism, defending ideas in disagreement situation and self-control of aggressiveness. The categorization of the therapists' behavior showed high frequency of asking for contemplation, recommendation and establishing explicative relations. Such variables in the therapeutic process are discussed with regards to the results and suggestions for future researches are provided.

INTRODUCTION

Some studies have demonstrated that depression is one of the most frequent mental health problems in the world (Razzouk, Alvarezand Mari, 2008). Depression is considereda public health issue associated to losses in the quality of life (Richards D, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders (APA, 2000) the Major Depression Disorder is typified when more than five specific symptoms are present (chiefly depressed humor, loss of interest and appetite, lack of pleasure, sleep disturbance, feelings of incapacity and guilt, suicidal thoughts and ideas), lasting for two weeks, in addition to alterations in the social and occupational performance. The Behavior Analysis has contributed to the examination of the several components related to depression, mainly on the ontogenetic and cultural variables (Cavalcante, 1997; Ferreira and Tourinho, 2011; Ferster,1973; Kanter, *et al*., 2004).Ferster described the similarity between several depressive symptoms with the effects of reinforcement extinction and highlights the need for identifying prominent gaps in the interactions, behavioral deficits, and typical avoidance of the depressed clinical state (Ferster,1973). Moreover, the author discusses that the activities of the depressed person are probably passive, that is, due to positive or aversive stimulation generated by other people, rarely from the emission of operants that produce positive reinforcers for itself. About the consequence function, the author highlights some variables: the low reinforcement density, extinction after reinforcement history, prolonged or uncontrollable punishment frequency, and positive and negative reinforcement frequency that increasethe suffering manifestations. Among respondent function, the author describes that insufficient reinforcement stimuli, extinction, and punishment evoke unconditioned response of sadness, frustration, or anger, and when such stimuli are matched to other relevant stimuli from the context, they start to evoke conditioned negative emotional responses. Concerning the establishing functions involved in depression, Ferster (1973) describes that frequently it is observed a decreasedability to feel pleasure in activities, what indicate contingencies that diminish the efficiency of some reinforcers and cause changes in motivation. Besides, events or conditions that produce low response rate and typical affective states of depression also work as establishing and suppressive operations (Dougher, and Hackbert, 1994). Different researches demonstrate thatcollege studentsconsists in groups at risk of psychological and social adjustments problems (Bolsoni-Silva and Loureiro, 2015a), for living the stressful situation of losing their social support system and dealing with new social and academic demands (Bolsoni-Silva *et al*., 2010). The lack of

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success in interpersonal relationship in the college environment may, in general, impair the quality of life and the academic life of college students,due to the decreased reinforcers obtained (Bolsoni-Silva, 2009a; Pacheco and Rangè, 2006). Most social situations involving aversive aspects for college students includes a modified family environment (Bandeira and Quaglia, 2005; Del Prette and Del Prette, 1983), i.e., a relative dependency on the family in this periodand possible changes in the interactions.

The main hypothesis of some studies on depression is that depressed people are less socially skillful than non-depressed people (Libet and Lewinsohn, 1973; Segrin, 2000). The connection between depression and social skills (SS) may have different formats and directions, since individuals with limited SS repertoire are more vulnerable to the progress of depression, while in other cases, the depressed experience may temporarily produce changes in how effective are social behaviors and inference in other problems (Segrin, 2000). It is assumed in the current study that social skills are behaviors emitted by the subject confrontation demands on an interpersonal situation (Del Prette, Del Prette, 2010). In this sense, SS may be understood as operant behaviors, therefore, maintained by its consequences, and they seem to maximize the acquisition of positive reinforcers in social contingencies (Bolsoni-Silva, 2002). Social skills and living situation were predictive of depression among Brazilian college students (Bolsoni-Silva, and Loureiro, 2015b). This study found a prevalence of 3,8% of depression diagnose among the 1282 university students investigated. Among relevant social contexts to assess the issue of mental health of college students it has been outstood public speaking and dealing with love and friends relationships (Boas at al. 2005; Del Prette and Del Prette, 2003; Pacheco and Rangè, 2006) and family relationships (Bandeira and Quaglia, 2005). Each of these contexts require the development of several skillful behaviors, which usually bring different levels of difficulties for college students, as the expression of positive feelings, self-control of aggressiveness, expression of negative feelings and asking for behavior change (Bandeira and Quaglia, 2005; Del Prette *et al*., 2004) refuse undesirable solicitations, disagree and argue defending its own rights and expressing its own opinion (Del Pretteand Del Prette, 1983). The depression group of college students presented fewer communication, affection and coping social skills, as well as they showed less potentialities and more difficulties in general social skills (Bolsoni-Silvaand Loureiro, 2015b).

Considering the connection between problems with social skill and depression, and given the importance social skills have on the college students' performance, providing these repertoires may be important for enabling the access to social reinforcers, broadening repertoires and assisting for suitable relationship and for the individual's health (Bolsoni-Silva,2009b). Therefore, the social skills training, as part of the analytic-behavioral therapy, may contribute for the development of family, loving, and academic relationship of college students. Social skills training (SST) is a generic term in reference to a set of strategies and techniques such as instruction, shaping, role-playing, and homework, in addition to arranging the setting and the use of selected therapeutic skills for the development of assertive social skills(Del Prette and Del Prette, 2003; Segrin, 2000), and in the current study, the SST was performed adequately with the Behavior Analysis's theoretical background (Bolsoni-Silva, 2002; Bolsoni-Silva and Loureiro, 2015b). There are promising results on the efficiency of social skills training as a treatment for depression (Bellack *et al*., 1983; Klein *et al*., 2011). There arereports that in twelve sessions the SST for interaction with family, friends, co-workers, and other people through instructions, role-playing, feedback, shaping, and positive reinforcement, resulted in the improvement of social skills in addition to self-reported depression, which were evident in a follow up 3 and 6 months later (Bellack *et al*., 1983). In a study about the application of the cognitive-behavioral therapy to chronic depressed patients, the procedure (McCullough, 2000) was focused on changing patterns on how to confront problems increasing social skill, and discriminating consequences of specific thoughts and behavior; This intervention combined to psychopharmacology was associated to significant improvements in depression and problem solving. Moreover, the changes in interpersonal problem solving was predictive of subsequent improvement of the depression symptoms through time, making use of strictly psychopharmacological treatment as well as the combination of medication and cognitive-behavioral therapy, which indicates a gap in the understanding about the possible specific therapeutic mechanisms responsible for the clinical change in depression, without the psychopharmacological support, in a way to enlighten the therapy's role and the development of skills to solve interpersonal problems. In this context, the aim of the present study was to characterize and describe the effects of social skills training in a behavior therapy process in groups of college students diagnosed with a recent Major Depressive Episode.

MATERIALS AND MATHODS

Participants: Two psychology therapist trainees studyingin the last year of the Psychology course at a public university were responsible for the group intervention. The participants or clients were two college students from the same university. The participant P1 was 21 years old man, attending the fourth year of Journalism graduation course. His family was composed of four people; the parents were married and lived in a small town. P1 left the parents' house to enter the university and lived with other two students. He had a sister three years older than him that lived in another city, with whom he had a very close relationship. He was single. The participant P2 was 22 years old woman, attended the fourth year of Physical Education graduation course. Her family was composed of four people and lived in the same city of P2. She continued to live with her parents after entering college. She had a younger brother who was 18 years old and also lived with their parents. She was dating for 6 months a student from the same college.

Local: The therapeutic process took place in a room for group therapy in a psychology schoolclinic from a public university.

Instruments: The instruments used on the evaluation process were:

- Structured clinical interview for *DSM-IV* - SCID-IV(Dal-Ben *et al*., 2001): it is a structured interview for the confirmation of psychiatric clinic disorder based on DSM-IV, composed by ten

modules that can be applied independently or combined, according to the objectives. In this study it was applied the "Module A" which refers to the evaluation of Humor Disorders, for confirming the diagnosis of Major Depression Episode obtained in the clients' triage and the excludingother Humor Disorders.

- Beck Depression Inventory – BDI (Cunha, 2001): it is a self-report inventory for identifying signs of depression symptoms regarding the type and intensity perceived by the client.

- Social Skills, Behaviors and Context Evaluation Questionnaire for College Students – *(QHC – College students)* – (Bolsoni-Silva and Loureiro, 2015a). It is composed by questions referring to how and how frequent the students behave regarding his parents, friends, boyfriend or girlfriend, roommates, and unknown audience, as well as their succeeding actions and feelings in each situation. The instrument is organized according to the following themes: Communication; Expressivity (positive and negative feelings, and opinions); Criticism (make and receive critics); Speaking in public (presenting seminars and speaking to unknown audience), and Additional Data (it is possible to add elements not approached in the questionnaire). The questions are twofold: a) frequency in which the theme is mentioned; b) characteristics of these behaviors: subjects, situations, and the participants' actions and feelings, and the interlocutor's actions (Bolsoni-Silvaand Loureiro, 2009). The instrument has cutscores for clinical and non-clinical parameters considering depression and anxiety. Social Skills Inventory – SSI – Del Prette (Del Prette, 2001): it is a self-report instrument composed by 38 items for assessing situational and behavioral dimensions of social skills. The participant must indicate the frequency in which it acts or feels according to each item, following a five-point Liker scale. The items are grouped in five factors.

- Semi-structured Interview – this interview was developed based on a script (Bolsoni-Silva *et al*., 2009) which aimed at informing about the clinical treatment and collecting data on their complaint and related variables.

Procedure

The participants were individually assessed in two 2-hour sessions with all instruments previously described in three different moments: one week before the group intervention began; the week subsequent to the intervention; and six months after the intervention (follow up). The assessments were scheduled in advance. This was the moment of stating the study's objectives and the Consent Form was signed by the participants. The single subject design was adopted (Cozby,2006), which sets measures of variables studied previously and subsequently to the treatment's introduction; changes in the afterwards measures may indicate the treatment's effect for those subjects. Due to the reduced number of participants in the study (two single subjects),it is impossible to generalize any results but it made possible to amplify the characterization on the process of manipulating the treatment variables for those cases, producing hypothesis and indicators to be tested in other studies.

As a way of minimizing the possibility of strange variables to be responsible for the change, some baseline measures were taken four months before the pre-test, and four months after the post test. Both participants obtained the Major Depressive Disorder diagnoses in the first evaluation (baseline). The second evaluation was performed six months (in average) after the first one. In the continuance, it was began, the group intervention with both clients (Bolsoni-Silva,2009b). By the end of the intervention a new assessment was established, four months after the follow up took place. The adopted group intervention procedure (Bolsoni-Silva, 2009b), which has been proven effective for promoting social skills repertoire in college students (Boas at al., 2005; Rocha, 2012). The group intervention with P1 and P2 was composed by 11 weekly meetings lasting about two hours each, conducted by the researchers. The meetings' basic plan is presented next:a) in the first part of each meeting the researcher investigated the homework and the events of the weeklooking for difficulties, performing functional analysis, and shaping relevant social repertoire; b) next, the social skills identified from the field literature and from the individual diagnose performed in the assessment phase, were increased; c) the next step in the therapeutic session was to carry out an informative and dialogued exposure of a social situation considered the main subject of that session, it was a second moment to identify difficulties, make functional analysis and shape relevant repertoires for each client's situation; d) some experiences and/or role-playing exercises were performed in order to shape the repertoire; e) in the first session the participants received the informativebook "*How to face the challenges of college"*(Bolsoni-Silva, 2009a), with the issues to be discussed on each meeting, contingently to the clients' complaints.

In this context, in each session, relevant contingencies that maintain the clients' complaint were searched, and, from it**,** socially skillful alternatives of solving interpersonal difficulties were developed by the use of behavioral techniques as role-playing (Souza *et al*., 2012), and some therapeutic management in the interaction with the clients, as asking questions about facts and feelings, asking for contemplation, demonstrating empathy, agreeing, disagreeing, interpreting, recommending, informing, and establishing relationships (Zamignani,2007); f) the sessions were finished with the client's evaluation on its own performance, the therapists', and on the pertinence of the procedure. Lastly, the therapist would request and explain the homework, those common for the group and sometimes for each client in specific. For P1 an individual analytical-behavioral therapy was occurring concomitantly, for the evaluation and intervention on difficulties to accept his own homosexuality and his difficulties on the maintenance of loving relationship.

Data Analyses

The data were analyzed under two aspects, the first was evaluating the efficacy of the intervention procedure (results of product), and the second referring to the natureof behaviors emitted by the therapist during the group's intervention sessions (results of process): (1) Results of product: about the scores in Social Skills and Depression obtained by the comparison of pre-test, post-test and follow up measures based

on the design. The data analyzed are the Social Skills measures (QHC-College students and SSI-Del-Prette) and Depression measures (BDI; SCID). For the analysis of the QHC-College students instrument, the results of the categories "Total of context; Total of skillful behavior; Total of non-skillful behavior; Total of positive consequences; Total of negative consequences" were organized in a table, gathering the data from all the evaluations of both clients. The SSI-Del-Prette (Del Prette, 2001) total and factorial score results were organized in a table containing all the assessment measures of both clients, pointing out the classifications from the instrument in addition to clinical and non-clinical indications. Data from BDI (Cunha, 2001) and SCID (Del-Ben *et al*., 2001) were ranked as clinical or non-clinical according to the instruments rules, and were described in a comparative way between all the assessment phases of all clients. (2) Results of Process: (a) description of the themes analyzed or developed in each session, according to the possible theme on the Social Skills scheduled to be discussed (Bolsoni-Silva,2009b); (b) characterization of the therapists' behaviors during the sessions (Zamignani,2007). The therapists' behaviors were categorized through paraphrased reports of all the group sessions in correspondence to the categories empathy, soliciting statements about facts and feelings, information, asking for contemplation, recommendation, interpretation, agreement or approval, disagreement or disapproval (Zamignani, 2007). The categorizations were performed by the therapists after the concordance agreement among observers (Danna and Matos, 1996), which was attested by an index of more than 80% of agreement according to the system adopted in the test in 30% of the session's total of reports. The observers worked independently in the categorization of the reports from the remaining sessions.

RESULTS

Diagnostic measures and depression self-report

The evaluations performed with BDI demonstrated how the indicators of depressed humor changed when compared with the before and after the intervention and in the follow up six months later. Both clients P1 and P2 demonstrated depressed humor one week before the group therapy began; P1 showed a moderate depressed humor (score 19) and P2 a light depressed humor (Pacheco and Rangè, 2006). In the evaluation right after the procedure the depressed humor of both clients had decreased to a minimal classification (6 for p1 and 3 for P2). diagnostic measures from SCID-IV (Del-Ben *et al*., 2001, McCullough, 2000) confirmed the results found with BDI (Cunha, 2001) about the variation of different depression symptoms in the three evaluation moments. The pre-evaluation from both P1 and P2 presented enough criteria for the diagnosis of the recent Major Depression Episode, considering that in the post intervention and follow up evaluations the minimum symptoms for the depression diagnosis were not found (depressed humor and extremely decreased interest or pleasure for almost every day,for at least fifteen days).

Social Skills Measures

The Social Skills Inventory (Del Prette, 2001) enabled the evaluation of different categories of the college students' social skills, as described in Table 1. Regarding the P1's results, it is observed that total scores and factorial scores were higher in the post-intervention evaluations than in the pre-intervention, demonstrating that the social skills evaluated by this instrument were, in a way, developed during the procedure. While the total percentile of social skills in the initial evaluation of P1 was between 5 and 10fitting the criteria for the clinical indication of skills deficit, in the post-intervention and follow up the total percentile was 30, demonstrating a better repertoire of social skills (although still under the average based on male college students' population). Moreover, it is noted that the higher percentile reached by P1 correspond to factorials 2 and 4, which are in reference to the expression of positive feelings and self-exposure to strangers and new situations. However, it was in factors 1 and 3 that refer to confrontation and self-affirming with risk and conversation, and social performance respectively, in which P1 presented higher improvements comparing the initial evaluation, demonstrating important repertoire increase, which is relevant, especially considering that some of his higher deficits were gathered in the categories measured by these factors, as for example, approaching for sexual relationship, expressing disappointments to friends and family, disagreeing from the group, speaking for unknown audience, deny abusive requests and ending conversation.

Furthermore, it is observed in the follow up evaluation that the social skills scores were enhanced in relation to the post-intervention moment, suggesting maintenance and amplification of the results along the time. The exception happens in relation to the decrease in the Factor 2 score which evaluates the expression of positive feelings, what, for P1, is considered a positive result, taking into account the analysis of

Table 1. IHS- DEL PRETTE: Comparison of total and factorial pre, post-test and follow up percentile

Client	P1			P2		
Phase	Pre-test	Post-test	Follow up	Pre-test	Post-test	Follow up
Factorial 1	15	55	70	60	60	70
Factorial 2	65	80	55	30	20	20
Factorial 3	5	20	55	70	95	95
Factorial 4	85	90	95	85	90	90
Factorial 5	30	40	40	55	85	85
Total	5	30	60	40	75	80

P1: Participant 1; P2: Participant 2

In the follow up both clients continued in the minimal classification (4 for P1 and 2 for P2), suggesting the maintenance of results obtained in the therapeutic stage. The contingencies developed in therapy on this repertoire having as function to verify the repetitive acceptance of people and paradoxically exert aversive control regarding sex partners (in

a way that the excess of expression of positive feelings to partners had the function to push in to a relationship the fastest the possible, and produce reports of passion and commitment from the other to him). P2 also presented better total scores in the post-intervention and follow up evaluations about her social skills. The total scores evolved from good SS repertoire category – below the median (pre-intervention) to a good repertoire – above the median. Regarding Factor 1, which evaluates the confrontation/auto-affirming with risk, P2 kept the good repertoire classification above the average, with a slight improvement after the procedure, possibly for overcoming the difficulties in disagreeing from the group, accepting criticism and disagreements, and difficulties in asking questions to strangers. Regarding Factor 2 which assesses self-affirmation in the expression of positive feelings, P2 presented a good repertoire classification below the median and at the end of the intervention it demonstrated a decrease reaching the classification for SST indication when the deficits became a source of problem. It was observed in the therapeutic process that P2 learned to better describe the contingencies, finding out her great difficulties in complimenting her relatives, so her restrictions in expressing positive feelings were solely regarding her relationship with her boyfriend; situation maintained at the end of the intervention. With regards to Factor 3 which evaluates conversation/social performance, P2 demonstrated great improvements, reaching the criteria of very elaborated repertoire at the end of the procedure, suggesting that these were the most improved skills by the procedure. For factor 4 that evaluates self-exposure to unknown people and new situations this participant maintained the very elaborated repertoire classification and a slight improvement after the procedure. Regarding Factor 5 that evaluates self-control of aggressiveness, again greater improvements are observed after the therapeutic procedure, changing the classification from good repertoire above the median to very elaborated repertoire. The intervention seems to have contributed for a significant progress for P2, regarding the expansion of these skills, exactly considered besides social skills the vulnerability of contexts and frequency in which the behaviors happened. The instrument also enables the evaluation of all these repertoires regarding mental health to be considered hereare depression and anxiety. In Table 2 it is observed the results from P1 and P2 regarding the clinical or non-clinical classification for the skills "Communication and Affection" (Factor 1), "Confrontation" (Factor 2), and "Speaking in Public" (Factor 3), besides the data on total of "Potentialities" (Factor 1a), and "Difficulties" (Factor 2a), in the pre and post-intervention, and follow up evaluations. Neither P1 nor P2 presented clinical problems for the skill "Speaking in Public" (Factor 3), which was maintained during and after the intervention. Regarding P1, it is observed that his clinical condition for depression and anxiety regarding communication and affection (Factor 1) was partially overcome by the intervention, since it changed its classification tonon-clinical for depression and kept the clinical for anxiety after the intervention. The same happens with confrontation skills (Factor 2), both groups of skills in the follow up take placein the non-clinical condition, demonstrating an improvement in the period after the intervention, indicating a long lasting generalization. About the potentialities, it is noted that the procedure was sufficient for increasing the repertoire in different contexts as well aspresentingit in higher frequency, which was expanded after the end of the intervention, as verified in the follow up assessment, which becomes extremely important when considering P1's clinical scores before the intervention. About the difficulties that P1 similarly presented clinical scores, it was possible to observe that only for anxiety it was maintained the clinical indicative after the intervention, which was also achieved in the period assessed in the follow up. About P2, it is observed, difficulties with clinical indicative for the skills of communication and affection (Factor 1), which remained the same in the post-intervention evaluations for depression and anxiety; for the period of time assessed by the follow up P2 reached improvements indicated by the non-clinical score for

Table 2. Reference scores to identify clinical and non-clinical behavioral aspects for clients P1 and P2 in the QHC-College students

	Classification											
	Depression						Anxiety					
Client and phase	P1			P2			P1			P2		
Part 1	Pre	Post	Foll.	Pre	Post	Foll.	Pre	Post	Foll.	Pre	Post	Foll.
Factor 1	17	20	22	17	18	20	17	20	22	17	18	20
	C	NC	NC	C	C	NC	C	C	NC	C	C	C
Factor 2	12	8	8	11	10	8	12	8	8	11	10	8
	C	NC	NC	C	C	NC	NC	C	NC	NC	NC	NC
Factor 3	6	6	7	6	6	6	6	6	7	6	6	6
	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Parte 2												
Factor 1a	70	91	102	92	129	132	70	91	102	92	129	132
	C	NC	NC	NC	NC	NC	C	NC	NC	NC	NC	NC
Factor 2a	101	16-	15	92	43	20	101	16	15	92	43	20
	C	NC	NC	C	C	C	C	C	NC	C	C	C

General categories – Factor 1: Communication and Affection. Factor 2: Confrontation. Factor 3: Speak in public. Factor 1a: Potentialities. Factor 2a Difficulties. C: Clinical, NC: Non-clinical.P1: Participant 1; P2: Participant 2.

The results from QHC – College students (Bolsoni-Silva and Loureiro, 2015a) also indicated data on the social skills of college students in different moments of evaluation, in addition to the potentiality and difficulties evaluations, which About the confrontation skills (Factor 2) the intervention enabled the most meaningful enhancements for P2 who had clinical indicative for anxiety and depression in the pre-intervention moment, overcoming such classification for

anxiety and maintaining clinical for depression in the post-intervention, and finally reaching non-clinical scores in the follow up assessment. P2 presented good scores for potentialities since the pre-intervention moment, which were amplified by the intervention and the follow up period. Regarding the difficulties, P2 showed clinical indicative for anxiety and for depression, which were not surpassed by the intervention or by the period afterwards.

Complaint reports, results and reminiscent difficulties

The analysis of the clinical interviews content performed in the beginning and end of the intervention enabled the identification of initial complaints, the main therapeutic results obtained and the problems that remained after the end of the procedure. Consisted of part of the client's complaints several symptoms from depression, similarly identified through BDI (Cunha, 2001)and SCID-IV (Del-Ben *et al*., 2001), as intense negative feelings ("stress", "emotional instability", "depressed humor", "emptiness" sensation, "guilt", "fear of losing", "insecurity"), difficulties in the daily functioning("unintentional weight loss", "trouble sleeping" or "insomnia"), and social difficulties (in the relationship with the parents, siblings, boyfriend; and in living with homosexuality for P1). Some of the broaden repertoire for both clients were: increasing self-knowledge; decreasing verbal aggressiveness; increasing the exposure to new situations and public; disagreeing with opinions; dealing with criticism; expressing feelings and giving negative feedback; and preserving its own rights and of its interlocutor; these were indicated by the participants as relevant for the resolution of those complaints reported in the beginning. Specifically for client P1, it was also significant the development of repertoires for expressing positive feelings contingently to the interlocutor's signs and approaching for affective and sexual relationships, even if insufficiently. For P2 it was specifically relevant to develop skills of asking questions and keeping conversation with acquainted interlocutors. After the group intervention P2 remained with partial difficulty to perceive favorable conditions in the social environment to approach and begin an affective and sexual relationship, besides remaining partially dependent on very frequent and intense demonstrations of affection and positive feelings to feel accepted and esteemed by others.

One difficulty that persisted was to publicly assume his homosexuality and his interpretation that his problems with love relationship were due to his appearance. Taking that into consideration, P1 who was been treated individually by one of the group's therapist, concomitantly to the group intervention, was advised to continue the individual process after the group sessions were through. P2, who took part only of the group, had some remaining difficulties as expressing positive feelings and dealing with fair criticism, chiefly in the family relations. The feelings of jealousy and insecurity for maintaining a boyfriend also remained, though in minor intensity and frequency. Even though P2 had the possibility of starting an individual therapeutic process she didn't accept it, which can be considered that the intervention was effective, however some subclinical symptoms remained.

Themes analyzed and developed on each session

Most themes in social skills and the contexts they occur were also discussed in other sessions to guarantee the flexibility in the development and intensification of social repertoire contingently to the difficulties reported by the clients on each session, as it can be observed in Table 3. It is observed in Table 3 that the social skills were frequently analyzed and increased in a contingent way to different and meaningful contexts for the participant, especially in family and love relationship, but also in communicating in public as suggested in the literature (Bandeira and Quaglia, 2005; Boas, at al., 2005; Del Prette and Del Prette,2003; Pacheco and Rangè,2006).The social skills more frequently analyzed and enhanced in sessions were: "Expression of positive feelings and complimenting" (10 to 11 sessions); "Expressing negative feelings, negative feedback, asking for behavior change" (10 - 11 sessions) were also recurrently developed during the procedures the social skills: "To know skillful and non-skillful behavior" (7 to 11 sessions), "Deal with criticism, acknowledge mistakes and apologize" (8 to 11 sessions).The less frequently analyzed and developed skills during the process were: "Begin and maintain conversation", "give and receive positive feedback" and "expressing opinions" (5 to 11 sessions each), "ask and answer questions", "know human rights" (4 to 11 sessions each); even so these themes were present in more than one third of the procedure, characterizing the flexible application of the analysis and development of different social skills, connecting one to the other.

Table 3. Themes and contexts analyzed and discussed in each session

Session Theme	1	2	3	4º	5	6	7	8	9	10	11
Start and keep conversation	X	X	.X		X						X
Ask and answer questions	X	X	X	X							
Know human rights			X	X	X						X
Know skillful and non-skillful behavior				X	X		X	X	X	X	X
Express positive feeling and compliment	X	X	X		X	X	X	X	X		X
Give and receive positive feedback and thank					X	X	X		X		X
Express and listening to opinions	X						X	X		X	X
Express negative feelings and feedback, ask for behavior change,	X	X	X		X	X	X	X	X	X	X
Deal with criticism, acknowledge mistakes and apologize			X	X		X	X	X	X	X	X
Contexts											
Family relationship	X	X	X	X	X	X	X	X	X	X	X
Love Relationship	X	X	X	X	X	X	X		X	X	X
Speaking in public	X	X	X	X		X	X	X			

Table 4. Behavior category of the therapists emitted in session

Session	1	2	3	4	5	6	7	8	9	10	11
Empathy	10	28	21	09	04	12	15	23	10	12	19
Agreement or approval	07	34	16	12	09	21	18	22	16	20	21
Disagreement or disapproval	-	03	01	-	03	01	02	01	-	02	-
Questions about facts or feelings	08	19	23	08	05	12	16	22	14	14	19
Ask for contemplation	08	17	41	14	12	20	10	32	21	19	38
Provide information	28	26	05	08	11	08	04	03	07	06	09
Establish relations	11	21	12	14	18	23	20	37	12	19	23
Recommendation	38	35	28	13	18	32	27	26	18	12	13

Characterization of the therapists' behaviors with clients during the sessions

Considering that the quality of the therapist-client interaction is important to obtain good results in the therapy, several studies have been done in the attempt to characterize and evaluate the interactions that constitute the therapeutic process (Meyerand Vermes, 2001; Silveira, 2009; Zamignani, 2007). In Table 4, it is shown the frequency in which the behaviors of the two therapists occur along the process, according to the categorization system used (Zamignani, 2007) in the analysis of the reports paraphrasing the sessions: It is observed that the most frequent behavior categories used by the therapists during the process were *Recommendation, Asking for Contemplation,* and *Establishing Relations.* Next, were also frequent the behaviors *Agreement or Approval* and *Empathy*. The least frequent behavior category was *Disagreement or Disapproval*.

DISCUSSION

The clear decrease in the BDI (Cunha , 2001) scores signs for a minor frequency of feelings of sadness and covert events typical of depression, which no longer are produced by the contingencies lived by the clients after the intervention. The participants statements in the final clinical interview suggest that the main changes in contingencies were the amplification in the social skills repertoire (Cunha, 2001; Segrin, 2000), changes in the consequential functions of the amplified responses (Cavalcante, 1997), and in the participants' verbal descriptions of their own contingencies (Ferreira and Tourinho 2011; Goldiamond, 1975). The multiple evaluation methods, on different variables and on different moments of the design increase the reliability and validity of the data (Kratochwill and Stoiber, 2002). The self-reported measures from this study, obtained through BDI (Cunha, 2001)and clinical interview ((Bolsoni-Silva *et al*., 2009), in association to the diagnostic measures of remission Major Depress Disorder given by SCID-IV (Del-Ben *et al*., 2001) present themselves as a better indication of the therapeutic procedure efficiency as a depression treatment for college students. Similarly, besides to the individual reports in the clinical interview the SSI (Del Prette, 2001) results also point to the increase of social skills as measures of the procedure effectiveness, in agreement to the literature on mental health of college students about the importance in obtaining reinforcers concerning friend and love relationships (Boas *et al.,* 2005; Boas *et al.,* 2005; Del Prette and Del Prette, 2003; Pacheco and Rangè, 2006) and family relationships (Bandeira and Quaglia, 2005). In the present study, both clients could improve their satisfaction about the love and family contingencies through the repertoire of self-control of aggressiveness, expression of negative feelings and asking for behavior change (Bandeira and Quaglia, 2005, Del Prette *et al*., 2004), disagreeing and arguing defending their own rights and expressing their own ideas (Del Pretteand Del Prette, 1983), and for P1 also through the expression of positive feelings (Bandeira and Quaglia, 2005; Del Pretteand Del Prette, 1983; Del Prette *et al*., 2004), in agreement to literature indicatives. In this sense, the results of the present study confirm the importance that, in the analytic-behavioral clinical context, it is established as an objective that the individual learn to describe the contingencies of his behaviors, producing self-knowledge and self-control, which are the basic conditions for the development of behavior repertoire of problem resolution and confrontation, including the development of social repertoire (Bolsoni-Silva, 2002). The QHC-College students (Bolsoni-Silva and Loureiro, 2015a) results show an increase in the variability of social interaction contexts, decrease in negative consequences and increase in positive consequences (Bolsoni-Silva, 2009a ; Pacheco andRangè, 2006), in other words, greater social competence for both clients. This result confirms the literature about the importance of improving social skills in depression treatment, concerning the role of poor social skills as predictive to mental health problems among college students (Bolsoni-Silva, and Loureiro, 2015b). The intervention aimed at developing social repertoires more than eliminating depressive symptoms, which happened considering the interdependence between different behaviors and the several social systems involved in the contingencies. In this sense, it might be said that the social skills repertoire acquired a similar function to problem-behaviors, producing the reinforcers which were sometimes obtained through the symptoms, bringing along social prejudices/impairments as consequences (Goldiamond, 1975). The social skills were developed in therapeutic context as more social competent possible alternative repertoires than those considered problematic along the contingencies analysis (Goldiamond, 1975).

For P1, it is relevant to discuss that simultaneously to the group therapy a weekly individual therapeutic process was in progress, which continued for the additional period of fifteen weeks after the end of the group procedures, what might justify the better results obtained by P1 in the post-test and especially in the follow-up (when he starts to present non-clinical scores in all the instruments, including QHC – college students).For P2, which participated exclusively in the group intervention procedure, the results of the QHC instrument shows improvements in the social skills of communication and affections, confrontation and potentialities; nonetheless, mainly for keeping high scores for difficulties it is possible to infer the

maintenance of interpersonal risk factors that did not have sufficient improvements, maintaining partial clinical scores for anxiety and depression. The results obtained seem to be in agreement with the recommendations about the limited time of the therapy and directivity of the therapist as variables related to the efficacy of treatment of depressed adults (Driessen, 2010), but it is relevant to question if shorter therapies for depression are as potent as the longest ones (Weisz *et al*. 2006).There are some indicatives that depression cases require about one year of therapeutic process to achieve positive results, disregarding a high probability that people with severe depression do not recover even after a long treatment or frequently relapse (Richards, 2011). The amount of time necessary for intervention with depressed adults still needs to be widely evaluated and discussed. Studies on Psychology Based on Evidence have pointed out that successful programs of prevention to depression in youngsters are structured and described in handbooks that explain the mechanisms and characteristics of the intervention process that must be implemented and adjusted for achieving positive results (Dozois and Dobson, 2004). In the present study, a previous semi-structured schedule was used for the group sessions along with the main social skills for each intervention (Bolsoni-Silva, 2009b), due to the fact that simpler skills are prerequisite for more complex skills.

The results on the most frequently discussed themes and social skills during the semi-structured procedure agree with literature findings on greater difficulties of college students regarding the expression of positive feelings, expression of dissatisfaction, and asking for behavior change (Bandeira and Quaglia, 2005; Del Prette *et al*., 2004). On the other hand, there are indicatives that the expression of negative feelings is more frequent in the repertoire of depressed people than the expression of positive feelings, besides, communicating negative feelings usually produce negative effects on the social environment, increasing the risk for rejection. The negative humor the depressed people express to their interlocutors seem to make them aversive, not attractive, despite other qualities they have, acting as non-contingent punishment to those who have a relation with the depressed person, diminishing the effects of adaptation and acceptance in the environment (Coyne, 1976). By the result of the current study it is possible that the depressed participant's problem in expressing negative feelings is referent to the non-skillful way of communicating them in association to the low frequency of expression of positive feelings in the same relations (Libet and Lewinsohn, 1973).

The repertoires "Dealing with criticism, acknowledging mistakes and apologizing" were also among the most frequent ones during this procedure with the depressed college students (8 from 11 sessions). In this sense, criticism and acknowledgement of mistakes were also frequently analyzed in this study's intervention, which suggests agreement to the issue of real rejections or preoccupation with possible rejections are critic content for the maintenance of the depression, and the behaviors of searching for and valuing excessively criticism from other people and searching for negative feedback were frequently found in the depressed people's reports and they were pointed out as possible risk factors for the increase in rejections and in the depressed behaviors frequency (Evraire and Dozois, 2001). These relations may aid explaining the occurrence of analysis and development of such social skills since the beginning of the procedure. Besides the need to increase other skills considered more simple as prerequisite of facilitators for behaviors that involve greater risks in the contingencies, as is the case of expressing negative feelings and dealing with criticsm. Despite the lowest frequency, more basic social skills and prerequisite for others were also analyzed and amplified in the intervention procedure, because participants presented their difficulties in identifying the context for different conversations and lack of repertoire for beginning conversation either with acquainted or unacquainted audience. These results are similar to the literature that state that depressed people start interactions about half the time in comparison to people without depression(Ferster, 1973; Libet, and Lewinsohn, 1973). To understand behavior as product of reinforcing contingencies implies in considering the identification and recognition of such contingencies in the therapeutic process, through appropriate intervention that make the client develop greater self-observation, self-control and self-knowledge (Goldiamond,1975). To develop self-knowledge as the behavioral focus in therapy require the use of questions that make the client describe contingencies and learn to establish functional relations, indicating the relevance of high frequency of some behaviors of the therapist as *Asking for contemplation*during the therapeutic procedure of the present study.

Considering that the performed intervention produced partially the desired results of overcoming depressed symptoms and increasing social skills, the high and constant frequency of *Recommendation* along the sessions contradict some prescriptions on the analytical-behavioral therapist's role. According to these prescriptions the excess in orientation would make it harder to acquire self-control and independence repertoires (Meyer and Vermes, 2001). The massive occurrence of Recommendation (Silveira, 2009) may be explained by the characteristics of the semi-structured intervention program used(Bolsoni-Silva,2009b), the procedures (techniques, activity structure, homework)and themes on social skills (which involve some alternative behavior models) planned for each session. This result seem to agree with indicatives that prescribing activities as homework (a type of Recommendation) is effective in the treatment of depression in adults, presenting some considerably great effects and comparable to other treatments either psychological or with antidepressant (Cuijpers *et al*, 2010), possibly for amplifying the generalization probability of the achieved results in sessions (Silveira, 2009) and an increase in exposure to contingencies from which depressed people usually avoid (Ferster,1973).

Moreover, with the identification of the other very frequent behaviors (Asking for contemplation, Establishing Relations, Agreement or Approval, and Empathy, respectively), it is understood that the Recommendations were constantly contextualized among other well known important strategies and typical of the therapeutic process, such as welcoming, understanding, and acceptance of the client (Empathy), shaping and modeling verbal behavior for describing contingencies and self-knowledge (Asking for contemplation and Establishing

Relations), and shaping alternative repertoires through successive approach (relative high frequency of Agreement or Approval and very low of Disagreement or Disapproval), in accordance to other studies previously described or prescribed (Follette *et al*., 1996; Meyer and Vermes, 2001; Silveira, 2009) which seem to decrease the directivity effect through which the recommended solutions are results of shared construction process between therapist and clients, of functional analysis and pertinent behavior alternatives to each case (Del Prette *et al*., 2004). The present study is partially aligned to the research recommendation from the Psychology Based on Evidence and Preventive Psychology, considering relevant aspects: a) making use of different scientifically valid instruments, including a mental health diagnostic evaluation; b) performing the data collection through a single subject design with follow up measures, in addition to pre and post-intervention assessments; c) description of measures from the product and the therapeutic process. Such aspects produce information capable of contributing for the development and application of more effective therapeutic intervention to depression in the studied context, the same way it enables the identification of relevant variables for the prevention of depression in young college students. However, the fact that all the evaluation instruments are applied by the self-report mechanism consists in a limitation of the study. Additionally, it is important to emphasize some limitations of the study, as a sample reduced to two participants and the absence of a control group, some issues that might make the generalization of the data harder and impeding a comparative or reference measure to the variables used in this study. Consequently**,** it is recommended that future researches may be performed through experimental design with wider samples, comparison to control group and observation registers combined to the self-report measures. Moreover, it is suggested that some variables of the therapeutic process to be used are tested, for example, evaluating the effects of treatments exclusively individual, in group, and a combination of both.

REFERENCES

American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders. 4th ed. Arlington (VA).

Bandeira, M. andQuaglia M.A.C. 2005. Habilidades sociais de estudantes universitários: identificação de situações sociais significativas. *Interação em Psicologia*. 9(1):45-55.

Bellack, A.S. *et al*. 1983. A comparison of social-skills training*, pharmacotherapy and psychotherapy for depression. Behaviour Research and Therapy*. 21(2):101-107.

Boas, A.C.V.V, at al. 2005. Descrição de efeitos de um procedimento de intervenção em grupo com universitários: um estudo piloto. *Interação em Psicologia*. 9(2):323-332.

Bolsoni-Silva, A.T. 2002. Habilidades Sociais: breve análise da teoria e da prática à luz da análise do comportamento. *Interação em Psicologia.* 6(2):233-242.

Bolsoni-Silva, A.T. 2009a. Como enfrentar os desafios da Universidade. São Carlos (SP): Suprema.

Bolsoni-Silva, A.T. 2009b. Habilidades sociais de universitários: Procedimentos de intervenção na perspectiva da análise do comportamen to. In: Wielenska RC, editor. Sobre comportamento e cognição. v. 23, Desafios, soluções e questionamentos. Santo André: ESETec.

Bolsoni-Silva, A.T. and Loureiro, S. R. 2015a. Questionário de Avaliação de Habilidades Sociais, Comportamentos e Contextos para Universitários (QHC-Universitários). Manual de Aplicação. São Paulo: CETEPP Centro editor de testes e pesquisas em psicologia LTDA.

Bolsoni-Silva, A.T. and Loureiro, S.R. 2009. Questionário de Habilidades Sociais para Universitários discriminando características para fobia social e déficits interpessoais. In: Anais do Congresso de Avaliação Psicológica – *IBAP, Campinas. Campinas* (SP): IBAP.

Bolsoni-Silva, A.T. and Loureiro, S.R. 2015b. Anxiety and Depression in Brazilian Undergraduate Students: The Role of Sociodemographic Variables, Undergraduate Course Characteristics and Social Skills. *British Journal of Applied Science and Technology*, v.5, n. 3.

Bolsoni-Silva, A.T., *et al*. 2009. Avaliação de um Treinamento de Habilidades Sociais (THS) com Universitários e Recém-Formados. *Interação em Psicologia.* 13(2):241-251.

Bolsoni-Silva, A.T., *et al*. 2010. Caracterização das habilidades sociais de universitários. Contextos Clínicos. 3(1):62-75.

Cavalcante, S.N. 1997. Notas sobre o fenômeno da depressão a partir de uma perspectiva analítico-comportamental. *Psicologia Ciência e Profissão*.17(2):2-12.

Coyne, J.C. 1976. Depression and the Response of others. *Journal of Abnormal Psychology*. 85(2):186-193.

Cozby, P.C. 2006. Métodos de pesquisa em ciências do comportamento. São Paulo: Atlas.

Cuijpers P, *et al*. 2010. Self-reported versus clinician-rated symptoms of depression as outcome measures in psychotherapy research on depression: *A meta-analysis. Clinical Psychology Review*, 30:768-778.

Cunha, J.A. 2001. Manual da versão em português das Escalas Beck. São Paulo: *Casa do Psicólogo*.

Del-Ben, C. M., Vilela, J. A. A., Crippa, J. A. S., Hallak, J. E. C., Labate, C. M. and Zuardi, A. W. 2001. Confiabilidade da "Entrevista Clinica Estruturada para o DSM-IV- Versao Clinica" traduzida para o portugues. Revista Brasileira de Psiquiatria, 23(3): 156-159.

Danna, M. F. and Matos, M. A. 1996. Ensinando observacao uma introducao, Teaching obsercation: an introduction. Sao Paulo: Edicon.

Del Prette Z.A.P. and Del Prette A. 2010. Habilidades Sociais e Análise do Comportamento: proximidades históricas e atualidades. Perspectivas em Análise do Comportamento. 1(2):104-115

Del Prette, A. and Del Prette, Z.A.P. 2003. No contexto da travessia para o ambiente de trabalho: treinamento de habilidades sociais com universitários. *Estudos de Psicologia*. 8(3):413-420.

Del Prette, Z.A.P, *et al*. 2004.Habilidades sociais de estudantes de Psicologia: um estudo multicêntrico. Psicologia: *Reflexão e Crítica*. 17(3):341-350.

Del Prette, Z.A.P. 2001. Inventário de Habilidades Sociais (IHS-Del-Prette): Manual de aplicação, apuração e interpretação. São Paulo: Casa do Psicólogo.

Del Prette, Z.A.P. and Del Prette. 1983. A Análise de repertório assertivo em estudantes de Psicologia. Revista de Psicologia.1:15-24.

Dougher, M.J and Hackbert L. 1994. A behavior-analytic account of depression and a case report using acceptance-based procedures. *The Behavior An*alyst. 17(2):321.

Dozois DJA and Dobson KS. 2004. The prevention of anxiety and depression – theory, research and practice. Washington (DC): American Psychological Association.

Driessen, E. 2010. The efficacy of short-term psychodynamic psychotherapy for depression: A meta-analysis. *Clinical Psychology Review*. 30:25–36.

Evraire, L.E. andDozois, D.J.A. 2001. An integrative model of excessive reassurance seeking and negative feedback seeking in the development and maintenance of depression. *Clinical Psychology Review*.31:1291-1003.

Ferreira, D.Cand Tourinho, E.Z. 2011. Relações entre depressão e contingências culturais nas sociedades modernas: interpretação analítico-comportamental. *Revista Brasileira de Terapia Comportamental e Cognitiva*. 13(1):20-36.

Ferster, C.B. 1973. A functional analysis of depression. American psychologist. 28(10):857-870.

Follette, W.C., *et al*. 1996. A radical behavioral understanding of the therapeutic relationship in effecting change. *Behavior Therapy*, 27(4):623-641.

Goldiamond, I. 1975. Alternative sets as a framework for behavioral formulations and research. *Behaviorism*. 3(1):49-85

Kanter, J.W, *et al*. 2004. Behavior analytic conceptualization and treatment of depression: Traditional models and recent advances. *The Behavior Analyst Today.* 5(3):255-274.

Klein, D.N., *et al*. 2011. Social problem solving and depressive symptoms over time: A randomized clinical trial of cognitive-behavioral analysis system of psychotherapy, brief supportive psychotherapy, and pharmacotherapy. *Journal of Consulting and Clinical Psychology*. 79(3):342-352.

Kratochwill TR and Stoiber KC. 2002. Evidence-Based Interventions in School Psychology: Conceptual Foundations of the Procedural and Coding Manual of Division 16 and the Society for the Study of School Psychology Task Force. School Psychology Quarterly. 17(4):341-389.

Libet, J.M. andLewinsohn, P.M. 1973.Concept of social skill with special reference to the behavior of depressed persons. Journal of Consulting and Clinical Psychlogy. 40(2):304-312.

McCullough, J.P. 2000. *Treatment for chronic depression: Cognitive behavioral analysis system of psychotherapy*. New York (NY): Guilford Press.

Meyer, S.B. and Vermes, J.S. 2001. Relação terapêutica. In: Rangé B. *et al*., editor. Psicoterapias cognitivo-comportamentais: um diálogo com a psiquiatria. 2ª ed. São Paulo: Artmed.

Pacheco, P. andRangè, B. 2006. Desenvolvimento de habilidades sociais em graduandos de Psicologia. In: Bandeira M, Del Prette ZAP, Del Prette A, editors. Estudos sobre habilidades sociais e relacionamento interpessoal. São Paulo: Casa do Psicólogo.

Razzouk D., Alvarez C. and Mari J. 2009. O impacto econômico e o custo social da depressão. Depressão: do neurônio ao funcionamento social.Porto Alegre: Artmed.

Richards, D. 2011.Prevalence and clinical course of depression: a review. *Clinical Psychology Review;* 31:1117-1125.

Rocha, J.F. 2012. Efeitos de uma intervenção comportamental com treino de habilidades sociais para universitários com fobia social [dissertação]. Bauru (SP): Universidade Estadual Paulista "Júlio de Mesquita Filho", Faculdade de Ciências.

Segrin, C. 2000. Social skills deficits associated with depression. *Clinical Psychology Review*. 20(3):379-403.

Silveira, F.F. 2009. Análise da interação terapêutica em uma intervenção de grupo com cuidadoras [dissertação]. Bauru (SP): Universidade Estadual Paulista "Júlio de Mesquita Filho", Faculdade de Ciências.

Souza, V.B. *et al*. 2012. Role-playing como estratégia facilitadora da análise funcional em contexto clínico. Revista Brasileira de Terapia Comportamental e Cognitiva. 14(3):102-122.

Weisz JR, *et al*. 2006. Effects of psychotherapy for depression in children and adolescents: a meta-analysis. *Psychological bulletin*. 132(1):132.

Zamignani, D.R. 2007. O desenvolvimento de um sistema multidimensional para a categorização de comportamentos na interação terapêutica [tese]. São Paulo: Universidade de São Paulo, Instituto de Psicologia.

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