ORIGINAL ARTICLE
IN BEHAVIORAL PSYCHOLOGY

Understanding emotional issues of clients approaching to nutrition counseling: A qualitative, exploratory study in Italy

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Abstract

Introduction: This study aimed to explore how stressful file events and clients' emotional feelings may affect their approach towards diet intervention, the client-nutritionist relationship, and dietary outcomes.
Methods: Semi-structured interviews were administered to a purposive sample of clients (n = 15; F = 15) and nutritionist/dietitians (n = 14; M = 2, F = 12). All interviews were conducted using an *ad hoc* track, and the analysis of transcripts was referenced to the Grounded Theory (GT) and to its qualitative analysis methodology.
Results: Our findings showed all clients experienced stressful life events and used food as emotional crutch, albeit with three levels of emotional self-awareness: 1) Clients with poor level of emotional self-awareness, emotionally vulnerable, who were diagnosed as 'emotional eaters'. In this case, the paternalist model in the therapeutic interpersonal relationship between client and nutritionists was prevalent; 2) 'emotional eaters' who were partially aware of their disorder and sough emotional support from nutritionist. In this case, the client-nutritionist relationship was more balanced; 3) no 'emotional eaters' clients, who well-recognized the risk of 'emotional eating' as a maladaptive strategy used to cope with emotionally negative life events and in turn were able to use adaptive coping strategies. In this case, the patient-centred approach in the client-nutritionist relationship was dominant. Conversely, nutritionists all understood that emotional feelings of their clients may impact on the effectiveness of diet and client-nutritionist relationship. Despite this, they all followed the biomedical approach to some degree, yet emphasizing the need to acquire new and more relevant competences in this area, as well as the importance of cooperation between nutritionists and psychologists.
Discussion and Conclusions: Having an holistic approach in order to meet the emotional needs of clients may enable nutritionists and dietitians to improve dietary outcomes through a more active, autonomous and patient-centred role for the client. Therefore, nutritionists and dietitians should acquire specific psychological skills and work together with psychologists for an integrative and interdisciplinary approach in the nutrition counselling.

KEY WORDS: Dietary outcomes; doctor-client relationship; emotional dysregulation; Grounded Theory; Nutrition.

Riassunto

Introduzione: Questo studio è stato realizzato con lo scopo di esplorare come gli eventi di vita stressanti ed i vissuti emotivi possono influenzare l'approccio dei clienti verso l'intervento nutrizionale, la relazione con il nutrizionista e i risultati dietetici.
Metodi: Sono state condotte delle interviste semi-strutturate ad un campione mirato di clienti (*n* = 15; F = 15) e di nutrizionisti/dietologi (*n* = 14; M = 2, F = 12). Tutte le interviste sono state condotte utilizzando delle "tracce" ad hoc e l'analisi qualitativa dei testi raccolti si è basata sulla Grounded Theory (GT) e sulla sua metodologia di analisi qualitativa.
Risultati: I nostri dati evidenziano che tutte le clienti hanno avuto esperienze di vita stressanti ed hanno utilizzato il cibo come supporto emotivo, anche se con livelli diversi di consapevolezza emotiva: 1) clienti con scarso grado di consapevolezza emotiva, emotivamente vulnerabili, individuate come "mangiatori emozionali". In questi casi, era prevalente nel rapporto terapeutico interpersonale tra cliente e nutrizionista il modello paternalistico; 2) "mangiatori emozionali" con una parziale consapevolezza delle proprie difficoltà emotive che cercavano supporto emotivo nel nutrizionista. In tal caso, la relazione cliente-nutrizionista era più equilibrata; 3) clienti non "mangiatori emozionali", in grado sia di riconoscere il mangiare emotivo come strategia disadattava, sia di ricorrere a più funzionali strategie di coping per fronteggiare eventi emotivamente stressanti. In tal caso, era dominante una relazione cliente-nutrizionista con un approccio centrato sul cliente. Al contrario, tutti i nutrizionisti avevano la chiara consapevolezza dell'importanza del vissuto emotivo sull'efficacia della dieta e della relazione cliente-nutrizionista. Tuttavia, essi seguivano l'approccio biomedico, anche se evidenziavano il bisogno di costruire opportune competenze in questo settore e l'importanza di collaborazione tra nutrizionisti e psicologi.
Discussione e Conclusioni: Un inquadramento olistico del paziente e delle sua richieste consentirebbe a nutrizionisti e dietologi di migliorare l'appropriatezza delle consulenze nutrizionali, promuovendo l'attiva partecipazione dei clienti e una loro maggiore responsabilità rispetto agli obiettivi dell'intervento dietologico. Risulta quindi importante che nutrizionisti e dietologi acquisiscano conoscenze di tipo psicologico e relazionale e lavorino insieme con gli psicologi per un approccio integrativo ed interdisciplinare nella consulenza nutrizionale.

TAKE-HOME MESSAGE

Nutritionists and dietitians should acquire psychological skills to better understand their client's emotional needs, which may affect their approach for nutrition counselling. An integrative and interdisciplinary approach could improve the nutrition-client relationship and dietary outcomes.

Competing interests - none declared.

Cite this article as: Pennella AR, Rubano C. Understanding emotional issues of clients approaching to dietary counseling: A qualitative, exploratory study in Italy. J Health Soc Sci. 2019;4(1):73-84

DOI 10.19204/2019/ndrs8

Received: 03/10/2018 Accepted: 06/01/2019 Published Online: 18/01/2019

INTRODUCTION

Even although nutritionist/dietitian's communicative and relationship skills with clients [1–3] have for a long time been considered of high-value, in literature there are still few studies addressing this topic. These skills, indeed, can affect the nutritionist-client relationship and, subsequently, dietary outcomes. In general, the doctor-patient relationship has evolved over years from a paternalistic model in which the doctor utilized own skills to decide without patient's consent to a more balanced and symmetrical interaction with a more active, autonomous and patient-centred role for the patient [4].

The client's reasons to start a weight loss diet and the nutritionist/dietitian's communication skills during a consultation are yet unexplored domains. In general, we tend to study the compliance or effectiveness of nutritional interventions as related to biomedical parameters or psychological characteristics of clients [5–7]. The biomedical model is essentially focused on the presence-absence of physical symptoms or diseases and is based on a passive role assumed by the patient toward physicians [8]. However, the psychological implications of food and the role it can play in the homeostasis are known even in 'non-clinical' population [9]. Eating behaviors can be considered a 'system of affective regulation' and eating disorders can be considered as related to emotional dysregulation [10–17]. Obese subjects, for example, tend to overeat because of their difficulty to discriminate between anxiety and hunger; indeed, they tend to eat to reduce the emotional distress [18], and would therefore be more likely than others to increase their food consumption under stress [19, 20]. In this regard, the role of nutrition as 'affective regulator' has been confirmed by studies on the relationship between life events (marriages, birth of children, separations, divorces, etc.) and food behaviors in adulthood [21–23]. If we, therefore, consider eating behaviors as a way to deal with emotion, a dysregulation in eating behaviors can be considered as an expression of a difficulty to deal with emotions. As a consequence, emotionally significant life events such as separations, mourning, relocations, and others might be potential triggers of an emotional dysregulation affecting food-related habits.

Therefore, it is possible to assume that in these situations the request for nutritional counselling could be considered as related to the clients' need to find in the nutritionist someone able to psychologically support them in their emotional dysregulation. Emotional eating is considered a form of disordered eating and was defined as 'an increase in food intake in response to negative emotions'. We can assume it as a maladaptive strategy used to cope with difficult emotional issues, in other words a form of emotion-focused coping, which attempts to minimize, regulate and prevent emotional distress [24]. It was suggested, furthermore, that management of eating disorders and emotional eating requires an holistic and multi-disciplinary approach and that the therapeutic alliance is essential for supporting the client's need for behavioural change and better dietary outcomes. In other words, client should engage in nutritional counselling with no fear of being judged [25].

Therefore, our study aimed to explore the role played by stressful life events and other emotional issues of clients approaching to nutritionist counseling for a dietary intervention. More specifically, we aimed to study how stressful file events and clients' emotional feelings may affect their approach towards diet intervention, the client-nutritionist relationship, and dietary outcomes.

METHODS

Study design and survey instruments

Considering the low number of studies in literature regarding the relationship between clients and dietitians or nutritionists, qualitative research methodology was the preferred choice for our research, with circular and interactive analysis procedures [26–28], which are particularly suitable for the exploration of little-known topics. Therefore, the present study used an exploratory approach for data collection. Collecting preliminary informa-

tion on this topic could be further useful for the development of further quantitative researches. Overall, 29 semi-structured interviews were carried out among clients and dietitians/nutritionists [29], using two different 'tracks' [30], one for clients (n = 15), and the other for dietitians/nutritionists (n = 14). The client interview addressed topics such as attitudes and expectations towards diets, the role of life events in their decision to go on or change diet, and the relationship with their nutritionist or dietitian (e.g., '*How did you decide to change your eating behavior and start a diet for the first time'? – 'Do you remember what events had happened in your life during that period'? – 'How would you describe your attitude toward your dietitian/nutritionist'?*). The topics of the nutritionist/dietitian interviews concerned clients' expectations about nutritional care, criteria used in evaluating client's request and estimating the probability of treatment success, and the role and characteristics of their relationship with clients (e.g., '*In your opinion, what do expectations urge your clients to contact you for a nutritional counselling'? – 'Do you think there is something that could help you understand if a client will be compliant with your instructions or if he/she will have difficulties to be on a diet'? 'Do you think that your perceived self-efficacy is affected by your affective relationship with clients in addition to technical issues'?*).

Theoretical framework and data analysis

All of the interviews were audio recorded and then transcribed. For the analysis of the material, reference was made to the Grounded Theory (GT) [31] and to its qualitative data analysis and methodology aimed at the inductive construction of theories starting from the collected data. More specifically, reference was made to the reformulation of the method in the constructivist context by Charmaz (2000, 2005) [32, 33]. The analysis procedure provides that the collected data must be conceptualized in order to grasp the implicit meanings to which, in a specific context, the data itself refers to. The conceptualizations that thus emerge are subdivided into categories and sub-categories, organized into a hierarchical system proceeded by successive degrees of abstraction (initial coding, theoretical coding, focused coding), until one 'unified theoretical explanation' is identified [31]. These coding phases, distinct from one another, define a process that recursively returns to refer to the data and to modify the previous conceptualizations, proceeding through a constant comparison method.

Initial coding

In this phase, useful concepts are being identified where key phrases are being marked and grouped into categories. As in past research [34–37], we decided to develop this phase using a 'narrative themes' [38] or 'meaning units' (MUs) [39, 40] approach. Once identified segments of text that, despite their size, have their own meaning and can be considered concluded, they were classified as MUs. At this stage, we are therefore still very much anchored to the text of the interviews.

Focused coding

In this phase, we selected what seemed to be the most useful initial codes and tested them against extensive data. At this stage, the level of abstraction is higher than in the first stage and it is raised by grouping the simplest conceptualizations into broader categories, because the goal is to organize more data.

Theoretical coding

In this third phase of analysis, the categories are organized into a hierarchical system. Once coding categories emerge, the goal here is to link them together in theoretical models around a central category that holds everything together and guide the investigator in the construction of explanatory hypotheses on the investigated phenomenon.

Sampling study

Our research involved Italian patients (n = 15) and nutritionist/dietitian (n = 14), from the healthcare private sector and was carried out in Rome, Italy, in the period between January 2017 and June 2018. It was adopted a theoretical sampling, which is a variation of the purposive sampling. Differently from purposive sampling, theoretical sampling attemp-

ts to discover categories and their elements in order to detect and explain interrelationships between them. Theoretical sampling is associated with grounded theory approach based on analytic induction [41]. The sampling plan was therefore non-probabilistic; more specifically, two specific sample groups were selected on the basis of accessibility or personal judgment of the researcher. Indeed, although this type of sampling technique includes an element of subjective judgement, it is the most helpful for exploratory studies, because it reflects the descriptive comments about the sample and gives cost-effectiveness and time-effectiveness benefits. Interviewees were selected according to their professional knowledge (nutritionists/dietitians) and experience (clients) regarding the object of interest. With regard to the patients, only female subjects were recruited, because the female gender is the most represented among those who turn to a nutritionist/dietitian or change their diet because of life events and/or stressful situations [21, 42].

Ethical consideration

Participation in our study was voluntary and informed written consent was obtained from participants. Potential risks and benefits of participation in the study were explained to the respondents. Confidentiality of information and anonymity of respondents were maintained throughout the survey. Our study followed the ethical guidelines for research in psychology published by the British Psychological Society and by the American Psychological Association [43, 44] and Helsinki Declaration [45].

RESULTS

Findings about patients/clients

In our sample the mean age of patients was 42.66 (*SD* = 8.04, range 31-55). Diets carried out by our patients was comprised between 2 and 5 (*M* = 3.4) and their duration was comprised between 4 and 18 months (*M* = 7.13, *SD* = 4.42). Therefore, all the respondents performed more than one diet under the supervision of a nutritionist or dietitian. All the interviewees expressed an emotional investment towards food, even if with different degrees of intensity and awareness. The analysis and encoding of the transcripts allowed to identify three clusters that can be positioned on a continuum defined according to the capacity of the subjects to self-regulate their eating behavior and their emotional states. At the 'healthy' extreme, it was found a first small group of interviewees showing a conscious and contextualized use of food, because they were able to 'regulate' their emotional states. We found in this group a high self-awareness of the 'emotional eating', normality of hunger and satiety mechanism, and a clear awareness of the psychological role that food can play in the management of emotional distress. The ability to use food consciously as a tool to self-regulate own affective system seemed to be highly associated with a high attitude to establish a trust relationship with her nutritionist/dietitian. Unlike the other two groups, they recognized the nutritionist/dietitian as a counterpart with different skills and perspectives, but with which it was possible to develop a positive and fruitful relationship, which was functional to their dietary behavioural changes. They were no 'emotional eaters' clients, because they well-recognized the risk of 'emotional eating' as a maladaptive strategy used to cope with emotionally negative life events. Instead, they were able to use adaptive coping strategies against stressful life events. In this case, the patient-centred approach in the client-nutritionist relationship was dominant.

In the intermediate part of the continuum, we found the majority of the interviewees (the 'second' group), for which the food accounted for a marked compensatory function, due to its 'healing' effects, which was used to address own emotional distress. Among these interviewees there was a certain level of awareness, which was lower than the first group. They were 'emotional eaters' and were partially aware of their disorder and, therefore, they sought emotional support from their nutritionist. In this case, the client-nutritionist relationship

was less balanced in comparison with the first group. The explicit objective of these clients was to recover their healthy status, through reduction of body weight and transformation of their physical aspect, by increasing their psychological balance and self-confidence, through the direct intervention of nutritionist/dietitian. They sought from their nutritionist to not only receive diet and food education, but also psychological support, in order to change their unhealthy dietary behaviours. In this group, the nutritionist/dietitian played a certain role as regulator of their behavior and emotional status.

"Well, now I'm on diet, and so I'm not going out to have dinner with friends (...); instead, when I'm not on a diet, I'm not so careful about these things, and, as a consequence, I might not be able to control myself. I need to be under the guidance of a physician; psychologically, I need to know that once a week or once every two weeks, I have an appointment for 'weight control' and that the nutritionist would be disappointed if I do not lose weight".
(Client 14)

In this second group, the connection between life events and request for nutritional counseling was more evident. In particular, the feeling of failure and helplessness experienced in some areas of their life (e.g., emotional relationships, work, maternity, etc.) prompted a shift from the need of 'emotional self-control' to dietary behavior changes.

"I had just graduated, I was unemployed, and I was spending all my time preparing sweets to eat (…); I didn't know if this was the reason to go on a diet (...), but I felt insecure because of my unemployment status, and I wanted to show everyone that I could do something; even if I could not handle my employment situation, at least I could control my weight (…).
(Client 13)
My sister's marriage was a significant event in my life (…) Marriage is one of the most important events in one's adulthood (…); you see all your friends starting to get married and to have children. And at that moment you realize that your generation is passing through…"
(Client 14)
"When you finish to study and start to work, you find yourself grown-up and, there, you must assume more responsability in your life…"
(Client 15)
"After the third pregnancy, I got fat (…), now I feel the need to become an attractive woman again…"
(Client 2)
"Before my father's death, I decided to be on diet, not only because I had gained a lot of weight, but also because my life had become chaotic…"
(Client 11)

At the opposite end of the continuum, there was the third group of clients in which the Loss of Control (LOC) eating was so intense that individuals were out of their control. These clients had poor levels of emotional self-awareness, they were emotionally vulnerable and diagnosed as 'emotional eater'. These subjects were unable to understand the relationships between emotion and food, failing to develop any process of reflection on their affective states. In this case, the paternalist model in the therapeutic interpersonal relationship between client and nutritionists was the most prevalent.

"*As that automatism is triggered, you have a repressible desire to eat. Once you start eating, you get an unpleasant feeling of losing control of your body*".
(Client 7)

In these cases, clients believed nutritionist/dietitians could solve their problems obtaining the desired results, without no active involvement in their nutritional care process. The weight loss, therefore, was not seen by clients as the result of a severe process, but rather a condition to reach through the external intervention of the nutritionist. They expected to be healed immediately, having the regard to the symptoms without fully understanding their meanings.

"*Monitoring the weight loss certainly helps, but it is not essential, because if something is triggered in your brain, you can run like a train even without being followed by a nutritionist".*
(Client 7)

In these situations, clients did not understand that it was very difficult to build a trust and effective relationship with their nutritionist based on an effective exchange of opinions and cooperation, in which the responsible role played by both could lead to the achievement of intended results.

Findings about nutriotionists/dietitians

With regard to our sample of nutritionists/dietitians, we interviewed 12 women and 2 men; they were six nutritionist biologists, four medical doctors, who were specialists in nutrition science, and four registered dietitians/nutritionist. All of them practised in the private sector. They aged between 32 and 66 (M = 42.43, SD = 11.54), with a number of patients/clients visited per month ranging from 15 to 120 (M = 41.64, SD = 35.05), and a duration of nutritional counseling comprised between 2 and 24 months (M = 8.62, SD = 3.21). The analysis of transcripts showed the need for nutritionists and dietitians to redefine clients' expectations concerning the control of their dietary behaviors. Although not mentioning explicitly the biomedical model, they all followed it to some degree, and their dissatisfaction was associated with a professional relationship that tended to place the client in a passive role, which is not very functional to cooperation, absolutely requested by every type of interventions of dietary education. Nutritionists and dietitians would have liked to develop with clients a better relationship to promote their motivation and involvement in the care process, in order to implement and maintain healthy eating behavior and nutrition lifestyles, beyond the biomedical model.

The importance of having communication and relational skills was well-recognized by all nutritionists/dietitians, whose attitude toward their clients was collaborative and non-paternalistic. In this regard, some of them showed a series of critical issues.

"I believe that a good client-nutritionist relationship is the most important thing (…), because meeting the needs of your client may be decisive for getting good outcomes. However, your technical skills and compliance with rules concerning nutrients are of limited value, if you do not emotionally understand the person in front of you. (Dietitian 8)

Sometimes, nutritionists and dietitians sought to promote a collaboration based on a friendly, informal and intimate approach with their clients. Therefore, many nutritionists recognized to exchange sometimes messages or advices with clients outside of the professional setting, in order to check their results, giving support and meeting their client's needs. However, they affirmed that this new role as advisor could alter the effective function as nutritionist, generating confusion between these two roles. Only a few interviewees stated to be able to establish and maintain the right distance from their clients. However, every nutritionist/dietitians were aware of the potential ambiguity of this kind of relationship. In many cases, indeed, the patient's intention to lose weight were not backed by facts. Often, their clients seemed to maintain their past unhealthy dietary behaviours, showing no efforts to get a good nutritional balance, and resulting in a prevision of failure.

"So, they say (…): 'I will try to do my best'. However, I feel that they don't have any intention to be on a diet".
(Dietitian 6)

In some cases of request for nutrition interventions, which were associated with stressful life events, clients activated effective resources for new dietary habits and nutritionist/dietitians interpreted them as a way to overcome other potential psychological disorders that might be related to those life events.

"I believe that stressful events prompt our patients to start a dietary change very quickly, that is always supported by a major life event (...); for example they say: 'okay, it's enough now, something very bad has happened in my life, but I must react, otherwise it will destroy me'(…)".
(Dietitian 9)

Nutritionists/dietitians all agree that their clients focused on beauty issues. Indeed, their requests were often motivated by the desire to improve their physical appearance and not to safeguard and/or promote their health status. On this point, there was a tacit conflict

between clients and nutritionists/dietitians, because, all health professionals underlined the importance of the biomedical aspects of nutrition, minimizing at the same time any requests for aesthetic reasons.

"Clients want to me perform a miracle. They have no concern for their own health…they want only to quickly lose some weight…"
(*Dietitian* 9)

DISCUSSION AND CONCLUSIONS

This study aimed to understand the influence of stressful events and emotional issues on clients approaching to a dietary intervention, from both the client and the nutritionist's point of view. Our exploratory research showed a close association between emotionally demanding life events (e.g., separations, layoffs, birth of children, etc.) and requests from a non-clinical sample of female clients for slimming diets. We found that situations in which persons are forced to redefine their own identity, while facing experiences of helplessness and inadequacy, by focusing on a diet could help them tackle and overcome their emotional issues, improving their self-efficacy and reinforcing their self-image and social desirability, which are often threatened by stressful life events. Another finding of this study is that when someone addresses a nutritionist/dietitian, there might be the willing to delegate own choices and control regarding nutritional behavior to an external figure. While clients are seeking to recover their mastery and self-efficacy, they need someone who act as a behavioral and affective regulator. Therefore, nutritionists and dietitians could be faced with situations where they have not to only address informative or educational questions, but also psychological and emotional issues. Nutritionist/dietitians are requested to advise, support, reproach the client by maintaining a relationship in which they tend to assume the role of a caregiver, such a friend, a family member or a parent.

All clients experienced stressful life events and used food as emotional crutch, yet with three levels of emotional self-awareness: 1) clients with poor level of emotional self-awareness, emotionally vulnerable, who were diagnosed as 'emotional eater'. In this case, the paternalist model in the therapeutic interpersonal relationship between client and nutritionists was prevalent; 2) 'emotional eaters' who were partially aware of their disorder and sough emotional support from nutritionist. In this case, the client-nutritionist relationship was more balanced; 3) no 'emotional eaters' clients, who well-recognized the risk of 'emotional eating' as a maladaptive strategy used to cope with emotionally negative life events and in turn were able to use adaptive coping strategies. In this case the patient-centred approach in the client-nutritionist relationship was dominant. Conversely, nutritionists all understood that emotional feelings of their clients may impact on the effectiveness of diet and client-nutritionist relationship. Therefore, despite they all followed the biomedical approach to some degree, they also emphasized the need to acquire new and more relevant competences in this area, as well as the importance of cooperation between nutritionists and psychologists for an interdisciplinary approach [24].

In order to meet these complex client's needs, in our study nutritionists and dietitians gave two different answers. The first response was a revival of the biomedical model. In this case, they offered a relationship based on two complementary roles: one decides and the other executes. This represents the paternalistic model of doctor-patient relationship, and the medical prescription is the cornerstone of this relationship. The goal of nutritionist/dietitian is to promote clients' compliance to a dietary behaviour by soliciting a fulfilling attitude. The biomedical model, however, tends to underestimate the importance of emotions and psychological aspects of clients. Indeed, client's confusion, uncertainty and discomfort are considered marginal elements for planning and managing the nutrition intervention. Although criticized for its relational limits [46–48], the biomedical model highlights the idea of a dietary intervention intended as 'cure'. In our study, although

many participants recognized that aesthetic reasons for nutrition requests from the clients may affect the global ("biopsychosocial") well-being of a person, most of them did not seem to explicitly include this aspect in their nutritional formulations. Only in some cases, they demonstrated a global and more complex vision of their clinical interventions. On the contrary, the second response by other nutritionists sought to directly address the client's emotions. However, in these cases, nutritionists and dietitians tended to unconsciously use a seductive approach to achieve compliance to their prescribed diets. But unfortunately, psychological and social components, are often overlooked or simply called as 'ingenuous psychology'. Nutritionists/dietitians are, therefore, exposed to an ambiguous and confusing relationship, in which nutritionist/dietitians look to become a caregiver such as a friend or confidant of the client. The analysis of the transcripts showed, however, that both approaches in our study did not result to be particularly effective. In particular, their limitations appeared in clients, who were overweight and/or with weight fluctuations, or with a medical history of many nutritional counseling requests. This type of client was periodically on a diet, but they looked like having no power of self-regulation with respect of their eating habit and, therefore, they needed an external control to maintain a healthy nutrition behaviour. In these cases, underestimating the underlying emotions of dietary dysregulation and reinforcing the dependence of clients on the nutritionist/dietitian, appears to be detrimental. However, even though nutritionists and dietitians were aware of the importance of interpersonal relationships with client and that the effectiveness of intervention is not only determined by a technically correct and careful monitoring of the client, often this awareness did not translate into a specific clinical practice.

The absence of psychological competences, probably, poses a risk to effectiveness of nutritional interventions. On the contrary, a holistic approach towards the client would allow the nutritionist/dietitian to have more valuable tools to address the psychological raised by clients. Therefore, this study highlights the importance of a biopsychosocial assessment of the client, which could facilitate the identification of possible indicators for intervention failure. Our study showed the importance of having an emotional approach to meet the needs of clients. This may enable nustritionists and dietitians to improve dietary outcomes through a more active, autonomous and patient-centred role for the client. This confirms that nutritionists and dietitians should acquire specific psychological skills and work together with psychologists for an integrative and interdisciplinary approach in the nutrition counselling.

This study had some limitations related to the small sample size of the study, which adopted a non-probabilistic sampling strategy and to qualitative study design. Therefore, our findings cannot be generalized to the entire population. Despite these limitations, this survey represents a preliminary and exploratory study that may generate other research hypotheses to be investigated by subsequent quantitative studies based on larger samples.

In conclusion, this research highlighted the need for to definitively move from a biomedical perspective to a biopsychosocial, more complex, approach in dietary interventions, in which healthy dietary interventions should not only be limited to biological or medical factors, but should include psychological and social aspects, as well. Our research suggested how an intervention that consider only biological factors, according to the traditional biomedical approach, is destined to only partial and non-lasting clinical outcomes, especially for those clients who nurture 'magical' fantasies about the weight loss intervention. It, therefore, seems necessary using psychological categories to early identify factors that hinder or favorite the success of a dietary intervention. As indicated by our study, a dietary intervention should not end up with the achievement of a pre-definite threshold of body weight or with a sufficient health nutrition knowledge, but it should also imply learning to change and self-regulate food habits

and related emotional states. For this reason, it is essential for dietitians and nutritionists to acquire some essential psychological skills in order to understand more accurately the intrinsic complexity of clients' requests. Nutritionists and dietitians should not to only be 'eating style' technicians, but they should promote awareness on emotional aspects and related consequences in their patients. From this perspective, psychology can provide support to these professionals in the framework of an interdisciplinary view. As confirmed by past experiences in the field of general medical practice [49, 50], for instance, cooperation between physicians or health professionals in general and psychologists can be useful to broaden the horizons of their knowledge and achieve better results in the way that every health intervention requires an interdisciplinary approach.

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