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The role of nurse support within an Internet-delivered weight management intervention: A qualitative study

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This qualitative study explored patients' experiences of nurse support for an Internet-delivered weight management intervention. Eighteen patients who had received either basic or regular nurse support (three or seven contacts, respectively) for the Internet intervention were interviewed. The data were analysed using thematic analysis. The findings suggest that more regular support for Internet interventions may have the potential to inhibit the development of autonomous motivation for weight loss, which might lead to problems in sustaining losses after support ends. Further research is now needed to confirm whether motivation is influenced by frequency of nurse support in Internet interventions in order to inform the development of optimal support which promotes sustained weight loss.

Keywords: weight management; Internet-delivered; self-determination theory; qualitative methods; social support

Introduction

In England, 24% of men and 26% of women are obese; without action, this could rise to 60 and 50%, respectively, by 2050 (Health Survey for England, 2013). Online interventions may be a cost-effective method of aiding weight loss, but may require supplementary human support to increase intervention effectiveness (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006).

Quantitative research findings concerning human support in online weight loss interventions are mixed. Some studies suggest that online human support produces comparable weight loss to frequent and basic in-person support groups (Harvey-Berino, Pintauro, Buzzell, & Gold, 2004; Micco et al., 2007). However, a recent meta-analysis reported significant weight loss for online interventions supplemented with face-to-face support, but significant weight gain when used as a substitute for face-to-face support (Kodama et al., 2012).

Qualitative process studies can provide valuable insight into why interventions may or may not be effective (Lewin, Glenton, & Oxman, 2009). Yet, qualitative research examining experiences of human support on online interventions is scarce. Morgan et al. (2011) explored participants' perceptions of SHED-IT, an online weight loss intervention including one brief face-to-face instructor support session. "Compliers", who

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successfully self-monitored their behaviour, were generally satisfied with the support, preferring the online intervention, whereas “non-compliers” wanted further face-to-face contact to maintain motivation. Patients have also expressed a desire for more human support to sustain motivation in qualitative studies of online interventions for other conditions, including diabetes and depression (Bendelin et al., 2011; Gerhards et al., 2011; Lyles et al., 2011). To date, no qualitative studies have explored patients’ experiences of different levels of human support accompanying online interventions; it, therefore, remains unclear whether patients might feel more motivated with more frequent support.

The *type* of motivation developed through receiving support may be important. Self-determination theory (Deci & Ryan, 1985) proposes that motivation varies from external to autonomous. Externally motivated individuals are stimulated by external pressures like accountability to someone monitoring their progress, whereas autonomously motivated individuals are driven to change their behaviour for their own interests (Ryan, Patrick, Deci, & Williams, 2008). Support should aim to enhance autonomous motivation, since externally motivated individuals may struggle once the external motivation ceases. Autonomy-promoting support also predicts superior weight losses (Gorin, Powers, Koestner, Raynor, & Wing, 2011; Williams, Grow, Freedman, Ryan, & Deci, 1996). Qualitative studies with face-to-face weight loss interventions suggest that frequent support may lead to over-reliance on the supporter, and patients not taking responsibility for permanent lifestyle changes (Garip & Yardley, 2011; Groven & Engelsrud, 2010). However, it is unclear whether more frequent support could foster external motivation or inhibit the development of autonomous motivation in online interventions.

Positive Online Weight Reduction (POWeR) is a nurse-supported online weight management intervention (see Yardley et al., 2014). Two levels of support were compared in a 12-month feasibility trial: basic (three scheduled contacts) and regular (seven scheduled contacts). This provided a novel opportunity to explore patients’ perceptions of varying levels of nurse support for an online intervention. The trial found that, after six months, patients receiving regular support showed increased weight loss compared to those receiving basic support, but by 12 months (after six months of no nurse support) their weight loss had almost halved, whereas the basic support group’s weight loss continued to increase and was superior at 12 months (Yardley et al., 2014). This paper details inductive qualitative research which explores patients’ experiences of nurse support to suggest how these may contribute to the trial findings.

Method

Participants

Eighteen patients were purposively sampled from those who had completed a six-month feasibility trial of POWeR in four NHS practices in South England to include both males and females from areas of varied deprivation. One patient had withdrawn from the trial but consented to be interviewed. Ethical approval was awarded and informed consent was collected within the trial. Patients had to be aged 18+ with a BMI of 28+ to participate in the trial.

Procedure

For the trial, all patients saw a female nurse at baseline, who explained the trial and took physical measurements, before being randomised into groups. Patients with basic nurse support (BS) received support sessions at two weeks, one month, three months

and six months. Those with regular nurse support (RS) received support at two weeks then monthly for six months. Nurse support was guided by brief structured training materials asking them to provide positive reinforcement and encourage patients to follow POWeR's online advice. Patients were weighed at baseline and six months, though some nurses chose to weigh patients at each support session. Support was predominantly provided face-to-face but occasionally by telephone or email.

Researcher 1, a postgraduate researcher, conducted semi-structured telephone interviews with seven BS group patients and 11 RS group patients. These explored patients' expectations of the support sessions, what was helpful and unhelpful, feelings about the amount and content of support, feelings about face-to-face support compared to other modes of delivery and any other support they received. Interviews were audio-taped and lasted around 30 min. Eighteen participants were felt to be sufficient to capture a range of views from varied demographics. No new themes emerged with later participants implying that saturation was achieved (Guest, Bunce, & Johnson, 2006).

Data analysis

Interviews were transcribed verbatim and identifiable data was removed. Patients were numbered to ensure anonymity. Researcher 1 conducted inductive thematic analysis (Braun & Clarke, 2006). Transcripts were read several times and coding ideas were recorded. Codes were arranged into initial themes and constant comparison was used to assess whether themes accurately represented all codes (Glaser, 1965). Codes and themes were agreed with Researchers 2 and 3. Deviant cases were sought and included in the analysis. A coding manual was created, updated and constantly discussed during this process, and an audit trail maintained.

Findings

Table 1 displays participants' characteristics.

Three themes were identified: "Experiences of nurse support", "Patient differences in motivation and preferences for nurse support" and "Modes of delivery of nurse support".

Experiences of nurse support

All patients were complimentary about their nurse's character, describing her as positive and pleasant even if they were not losing much weight. Her non-critical, relaxed attitude was appreciated:

She said well don't worry if your weight's gone up just keep going and ease back a bit and slow down and she was trying to encourage me not to stop, but just to either take a rain check or have a breather. (P15, male, RS)

A few patients described the sessions as very much up to them as well as the nurse. Some made comparisons to previous, less collaborative interactions with health professionals; for instance, one female was grateful that the nurse "wasn't pushy" as this would make her "feel very guilty" (P22, female, RS). Some patients said the nurse made them feel they were losing weight for themselves, which might foster more autonomous motivation:

She makes you feel like you're sort of, you're doing it for yourself really, not to please her. (P23, male, RS)

Table 1. Patient characteristics by nurse support group.

	Basic support (<i>n</i> = 7)	Regular support (<i>n</i> = 11)
<i>Gender</i>		
Male/female	5/2	3/8
<i>Age</i>		
31–40	0	1
41–50	2	3
51–60	2	3
61–70	3	2
71+	0	2
<i>Ethnicity</i>		
White British	7	11
<i>Employment status</i>		
Employed	3	5
Self-employed	3	1
Retired	1	4
Unemployed	0	1
<i>Education</i>		
Left school pre-GCSEs	1	6
Left school aged 17–18	1	1
A-Levels	2	0
University degree/diploma	1	
Postgraduate degree	2	1
<i>Marital status</i>		
Single	1	1
Married	5	9
Widowed	0	1
Divorced	1	0

The nurse was regularly seen as someone to monitor progress; although patients could monitor their weight themselves, some liked to have this confirmed and discuss personal weight management issues with the nurse. A minority wanted more weight monitoring and progress discussion. Many felt the nurse gave the intervention a personal touch and felt she could offer weight management suggestions, implying that they perceived her as credible.

Along with advice, most patients mentioned receiving encouragement and positive feedback from the nurse. This appeared to enhance motivation to continue with the intervention:

You think oh yes, I am doing something right. (P21, female, RS)

Every time I went to see her I came away feeling positive and that this was something that I could achieve. (P16, female, RS)

Some patients valued the nurse sharing her own weight loss experience, as it helped them to feel she understood their situation. However, one patient was critical in this respect:

She's a lovely lady but she was skinny as a rake ... I said d'you know it's really tough ... and she says, oh I find it very easy. And I thought, I didn't wanna know that ... in terms of motivating me to lose weight, she didn't really. (P11, female, BS)

Patient differences in motivation and preferences for nurse support

Patients appeared to differ in whether their weight loss was more autonomously or externally motivated, and in their preferences for nurse support.

Some patients appeared more autonomously motivated: they placed little importance on seeing the nurse, feeling she was not responsible for their weight loss, and were satisfied with the frequency of nurse support. Notably, these patients were all male and received basic support:

To date I've managed to get the best out of this that I can. So I haven't had to rely on support. (P12, male, BS)

I was doing well and didn't need a lot of help. I think what I received I thought worked out well. I didn't think I needed any more. I don't think it would have been as good if there were less face-to-faces either. (P6, male, BS)

Conversely, several patients, most from the RS group, appeared more externally motivated, perceiving the nurse as a motivation to adhere to the intervention and as someone to check up on them, with some describing the nurse support as a guilt trip or fear factor to lose weight. However, there were differing opinions as to whether this was the desired effect:

I thought that if I was being monitored it would make me enthusiastic, and stick with it. (P16, female, RS)

That the support's there is, oh god I haven't done what I should have done and I promised to do it and I know that isn't what's supposed to spur you on but it I think it does. (P22, female, RS)

Accountability may be beneficial, but over-reliance on external motivation may cause problems when it decreases or ceases:

I knew I had to go and see somebody every fortnight I made more effort but you think to yourself oh I don't have to see her for another six weeks, and you let it go. (P9, female, BS)

These patients felt wary of continuing the trial without the nurse, feeling they might revert to old unhealthy behaviours. Some wanted more frequent support e.g. fortnightly, as it "keeps you focused a bit more" (P14, female, RS). These patients also frequently mentioned appreciating having someone to talk to about their weight management experiences. Seeing the nurse as an external motivation was more commonly reported by females, although perhaps males were reluctant to admit this.

A final group of patients from both support groups saw the nurse as a motivation to adhere to the intervention, valuing her positive feedback, encouragement and suggestions. They also saw the nurse as someone to check up on them, but did not place great importance on nurse support, were satisfied with the frequency and were happy to continue without support, implying that despite some of their weight loss motivation being generated by the nurse, they had also developed some level of autonomous motivation:

I've changed my lifestyle so I don't think I'll find the next bit too challenging ... if I don't see the nurse I feel I've got the motivation to continue now on my own. (P23, male, RS)

Modes of delivery of nurse support

Patients generally expressed preference for face-to-face over email or telephone support. Several patients considered seeing the nurse as more personal, e.g. “you feel as if you’re getting one-to-one attention” (P6, male, BS). A few thought telephone and email may be helpful to keep focus and check up on them, though not as a substitute for face-to-face support; this was more frequently mentioned by those who appeared more externally motivated. Others expressed that once they felt they were achieving their goals they no longer needed face-to-face support. Knowing the nurse was available via telephone or email appeared to offer reassurance.

Some patients discussed the importance of nurse support relative to the online intervention. Some saw the nurse support as secondary to the website; conversely some, particularly those who appeared more externally motivated, preferred the nurse:

For me the stuff on the computer was secondary to going to the surgery and speaking to somebody and having that intimate face-to-face ... it’s easier to, not ignore it but when it’s not an actual person, it doesn’t have the same effect I don’t think. (P16, female, RS)

Others saw the nurse and the website as complementary:

I wouldn’t seek to do one or the other. The two work quite well together I think ... the website is the information back-up, and apart from logging your own progress it’s the less personally orientated to you part of it, but that’s then complemented by the personal contact side through the surgery. (P12, male, BS)

Discussion

This is the first qualitative study to explore perceptions of different levels of human support (basic and regular) for an online weight management intervention. The findings highlight potentially important motivational differences between these groups. Some patients who received BS appeared to demonstrate purely autonomous motivation for weight loss; this was not apparent in the RS group. In contrast, many RS patients seemed to demonstrate some level of external motivation; even those who did not desire further support also felt that the nurse motivated them to lose weight and that part of her role was to check up on them. More regular support may promote the perception that one is being checked up on, which can inhibit purely autonomous motivation (Lerner & Tetlock, 1999). It is not possible to tell whether this was definitely the case here, as motivation was not measured at baseline; however, our trial results provide a consistent picture, as the RS group regained weight between 6 and 12 months (where no support was received), whereas the BS group’s weight loss continued to increase and was superior at 12 months (Yardley et al., 2014). As autonomous motivation has been shown to promote greater weight loss (Williams et al., 1996), purely autonomous motivation might have been inhibited in the RS group, leading to superior weight losses in the BS group once nurse support ceased. Further research should investigate whether more regular human support for online interventions does inhibit purely autonomous motivation, perhaps by fostering perceptions of being checked up on (e.g. Groven & Engelsrud, 2010).

Interestingly, the more autonomously motivated patients were all male. Men may be more inclined to view weight loss as a personal endeavour (Morgan et al., 2011) and report relying less on others for support, as this may compromise their perceived male

identity as being independent and in control (Watson, 2000). This might account for more males appearing autonomously motivated than females. However, other men did appear to be externally motivated by the nurse support, and members of both genders demonstrated a mixture of autonomous and external motivation, indicating that both genders can potentially develop autonomous motivation.

Self-determination theory proposes that autonomous motivation to change behaviour can be developed and sustained through providing an autonomy-supportive environment (Deci, Eghari, Patrick, & Leone, 1994; Ryan & Deci, 2000). This can be achieved by being empathic, recognising the difficulty of behaviour change, and offering collaborative decision-making (Chatzisarantis, Hagger, Wang, & Thøgersen-Ntoumani, 2009). The nurses were generally perceived as providing this environment, and were seen as competent and caring, characteristics thought to contribute to patients' trust in health care practitioners (Horne, Skelton, Speed, & Todd, 2010; Thomas et al., 2009) and to an autonomy-supportive environment (Ryan et al., 2008) (though extra nurse training could reduce the likelihood of maladaptive interactions e.g. mentioning finding weight management easy). Despite this, after six months of nurse support, some patients appeared to be externally motivated by accountability to the nurse. As this was more prominent in RS patients, more regular support might inhibit purely autonomous motivation. Or, perhaps, some patients will never develop autonomous motivation to lose weight and may desire frequent or even indefinite human support, which would diminish cost-effectiveness. Longitudinal research investigating how motivation changes over time would be useful to explore these possibilities further.

Almost all patients favoured face-to-face rather than telephone or email nurse support, which were viewed as less personal. However, some perceived telephone or email support as acceptable for specific tasks, such as checking up or keeping them focussed. These tasks seem linked to developing external motivation through accountability to the nurse. It is unclear from this study whether telephone and email support can provide an equally autonomy-supportive environment compared to face-to-face support. This might be partly due to the additional non-verbal and contextual cues present in face-to-face consultations (Mohr, Cuijpers, & Lehman, 2011), which might promote elements of autonomy support such as empathy and collaboration more easily. Furthermore, the weighing which is possible in face-to-face meetings might reinforce the rationale for behaviour change, further promoting an autonomy-supportive environment. Future research could explore whether autonomous support can be provided equally through face-to-face, telephone and email.

Strengths and limitations

Males were well represented (44%), which is uncommon in weight loss research. However, all patients were White British and mean age was 57, so may not be representative of other cultural groups and younger adults. Saturation was felt to be achieved with 18 patients, but group sizes were unequal due to patients volunteering for interview, and as with all qualitative studies, it is possible that other viewpoints may have been uncovered with further sampling. Virtually, all interviewed patients were still in the trial. The perceptions of withdrawn patients may vary, and patients who volunteer for interview may be more likely to report positive experiences.

Conclusion

These findings suggest that more regular human support for Internet interventions may have the potential to inhibit the development of autonomous motivation for weight loss. Further research could investigate how motivation changes between baseline and six months in each support group to confirm whether motivation is indeed influenced by frequency of nurse support. Research could also explore whether other modes of support delivery can provide an autonomy-supportive environment comparable to face-to-face support, especially with younger adults and varied cultural groups. This could subsequently inform the development of interventions with optimal support for successful sustained weight loss.

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References

- Bendelin, N., Hesser, H., Dahl, J., Carlbring, P., Nelson, K. Z., & Andersson, G. (2011). Experiences of guided Internet-based cognitive-behavioural treatment for depression: A qualitative study. *BMC Psychiatry, 11*, 1–10.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101.
- Chatzisarantis, N. L. D., Hagger, M. S., Wang, C. K. J., & Thøgersen-Ntoumani, C. (2009). The effects of social identity and perceived autonomy support on health behaviour within the theory of planned behaviour. *Current Psychology, 28*, 55–68.
- Deci, E. L., Eghari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality, 62*, 119–142.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Garip, G., & Yardley, L. (2011). A synthesis of qualitative research on overweight and obese people's views and experiences of weight management. *Clinical Obesity, 2011*, 110–126.
- Gerhards, S. A. H., Abma, T. A., Arntz, A., de Graaf, L. E., Evers, S. M. A., Huibers, M. J. H., & Widdershoven, G. A. M. (2011). Improving adherence and effectiveness of computerised cognitive behavioural therapy without support for depression: A qualitative study on patient experiences. *Journal of Affective Disorders, 129*, 117–125.
- Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*, 436–445.
- Gorin, A. A., Powers, T. A., Koestner, R., Raynor, H., & Wing, R. (2011). Social support for weight loss: What helps, what hurts? *Annals of Behavioral Medicine, 41*, 49.
- Griffiths, F., Lindenmeyer, A., Powell, J., Lowe, P., & Thorogood, M. (2006). Why are health care interventions delivered over the Internet? A systematic review of the published literature. *Journal of Medical Internet Research, 8*, e10.
- Groven, K. S., & Engelsrud, G. (2010). Dilemmas in the process of weight reduction: Exploring how women experience training as a means of losing weight. *International Journal of Qualitative Studies on Health and Well-Being, 5*, 1–13.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods, 18*, 59–82.
- Harvey-Berino, J., Pintauro, S., Buzzell, P., & Gold, E. C. (2004). Effect of Internet support on the long-term maintenance of weight loss. *Obesity Research, 12*, 320–329.
- Health Survey for England. (2013). *Statistics on obesity, physical activity and diet: England, 2013*. Retrieved March 13, 2013 from <https://catalogue.ic.nhs.uk/publications/public-health/obesity/obes-phys-acti-diet-eng-2013/obes-phys-acti-diet-eng-2013-rep.pdf>

- Horne, M., Skelton, D., Speed, S., & Todd, C. (2010). The influence of primary health care professionals in encouraging exercise and physical activity uptake among White and South Asian older adults: Experiences of young older adults. *Patient Education and Counseling*, 78, 97–103.
- Kodama, S., Saito, K., Tanaka, S., Horikawa, C., Fujiwara, K., Hirasawa, R., ... Sone, H. (2012). Effect of web-based lifestyle modification on weight control: A meta-analysis. *International Journal of Obesity*, 36, 675–685.
- Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255–275.
- Lewin, S., Glenton, C., & Oxman, A. D. (2009). Use of qualitative methods alongside randomised controlled trials of complex healthcare interventions: Methodological study. *British Medical Journal*, 339, b3496.
- Lyles, C. R., Harris, L. T., Le, T., Flowers, J., Tufano, J., Britt, D., ... Ralston, J. D. (2011). Qualitative evaluation of a mobile phone and web-based collaborative care intervention for patients with type 2 diabetes. *Diabetes Technology and Therapeutics*, 13, 563–569.
- Micco, N., Gold, B., Buzzell, P., Leonard, H., Pintauro, S., & Harvey-Berino, J. (2007). Minimal in-person support as an adjunct to Internet obesity treatment. *Annals of Behavioral Medicine*, 33, 49–56.
- Mohr, D. C., Cuijpers, P., & Lehman, K. (2011). Supportive accountability: A model for providing human support to enhance adherence to e-health interventions. *Journal of Medical Internet Research*, 13, e30.
- Morgan, P. J., Lubans, D. R., Collins, C. E., Warren, J. M., & Callister, R. (2011). 12-month outcomes and process evaluation of the SHED-IT RCT: An Internet-based weight loss program targeting men. *Obesity*, 19, 142–151.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78.
- Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on self-determination theory. *The European Health Psychologist*, 10, 2–5.
- Thomas, J. L., Stewart, D. W., Lynam, I. M., Daley, C. M., Befort, C., Scherber, R. M., ... Ahluwalia, J. S. (2009). Support needs of overweight African American women for weight loss. *American Journal of Health Behavior*, 33, 339–352.
- Watson, J. (2000). *Male bodies: Health, culture and identity*. Buckingham: Open University Press.
- Williams, G. C., Grow, V. M., Freedman, Z. R., Ryan, R. M., & Deci, E. L. (1996). Motivational predictors of weight loss and weight loss maintenance. *Journal of Personality and Social Psychology*, 70, 115–126.
- Yardley, L., Ware, L., Smith, E., Williams, S., Bradbury, K., Arden-Close, E., ... Little, P. (2014). Randomised controlled feasibility trial of a web-based weight management intervention with nurse support for obese patients in primary care. *International Journal of Behavioral Nutrition and Physical Activity*, 11, 1–11.