

**Quality of Life and
Absorbent Hygiene Products**
The Social Dimension of Sustainability



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1) Introduction

Long gone are the days when there was no option for women but to use cloths to capture their menstrual flow or to wash and dry endless diapers by hand. Gone too are the days when people suffering from incontinence had no option but to stay at home and hide their condition. The emergence of disposable absorbent hygiene products for babies, menstruating women and people suffering from incontinence has transformed the lives of millions of people whether they are users of the products or people who care for them.

Anecdotes abound from previous generations about what life was like before the emergence of today's modern absorbent hygiene products. In this briefing paper we summarise existing research which documents the social benefits of absorbent hygiene products. This research falls into two categories:

- **Academic or scientific research** that provides factual evidence about the quality of life benefits of absorbent hygiene products;
- **Opinion research**, both public opinion and stakeholder opinion, which gauges the benefit people experience from having access to absorbent hygiene products.

For the purpose of this briefing paper absorbent hygiene products are defined as disposable baby diapers, sanitary protection pads, tampons, disposal incontinence products and personal care wipes.

The term **quality of life** is often used, but rarely defined. In this briefing paper we define quality of life as those attributes people value in generating an overall sense of well-being based on comfort, social acceptability, health considerations and ability to function within society.

Quality of life is integral to the social dimension of sustainability; a concept which seeks to achieve economic and social development through improvements in lifestyle and well-being, while conserving resources and protecting the environment.

The material used in this briefing paper has been drawn from both industry commissioned and public domain research which is listed in the References Section on p13.



2) Modern Disposable Diapers and Quality of Life

Since their introduction, modern single-use diaper products have improved steadily through scientific advances in design and basic raw materials, becoming lighter, more compact, more absorbent, more resistant to leakage and easier to use.

Originally they were promoted for use on journeys, holidays and in temporary situations but it did not take long for parents to realise how practical and convenient they were for everyday use. Today it is estimated that more than 95 percent of parents in advanced economies use them.

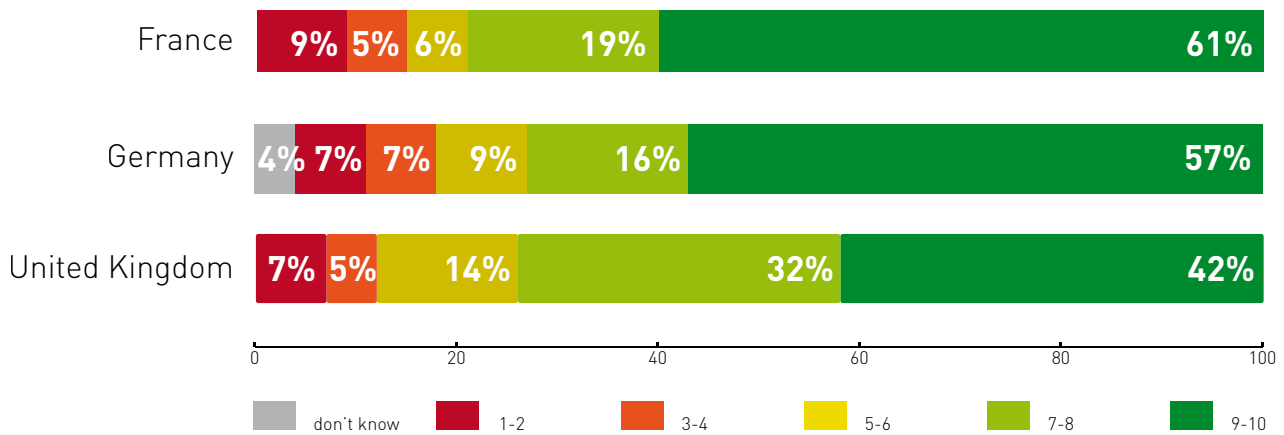
The benefits of disposable baby diapers for parents

In an opinion survey undertaken by the Louis Harris Research Group in Europe in 1997, respondents with children identified disposable diapers as the second greatest improvement in contemporary life (the first being the automatic washing machine), compared with the generation that went before them.

In a survey undertaken in August 2007, which involved some 350 women with children under the age of 9 in France, Germany and the UK, 87 percent rated the positive impact of using disposable diapers.

Parental Quality of Life and Baby Diapers

Rate the impact on a scale of 1 – 10 (where one is no impact at all), that using disposable nappies has on the daily quality of life for a woman with a child wearing nappies.

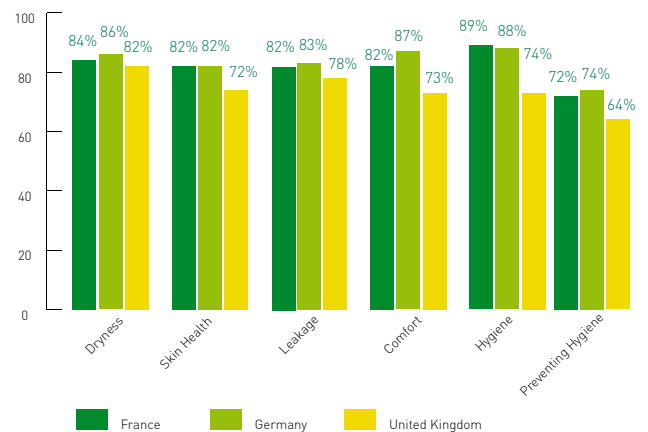


In the same survey, when mothers were asked to rate a number of attributes of disposable baby diapers that contribute to improved quality of life, they rated dryness, hygiene, leakage control, comfort, skin health and preventing infections as most important.

While environmental concerns are without doubt high on the public agenda, mothers show less willingness to give up disposable diapers than many other everyday products in order to reduce their carbon footprint.

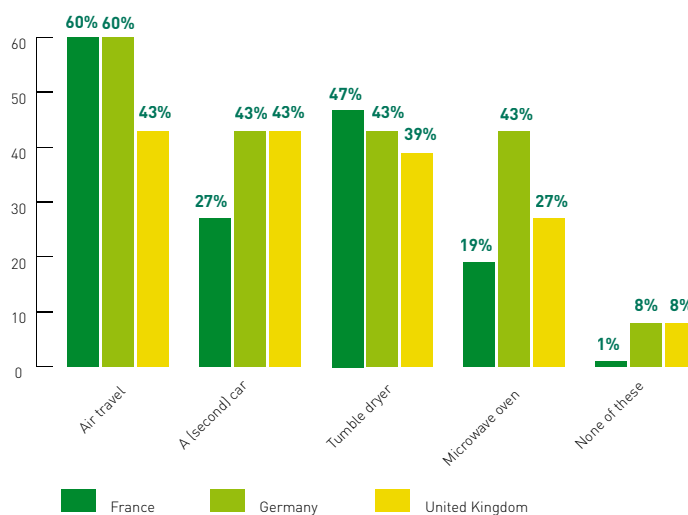
Quality of Life Attributes of Disposable Diapers

Percentage of women rating each attribute as having a very large, or large impact on quality of life considerations.



As a mother if you were forced to give up using certain products for environmental reasons which of the following would you be prepared to forego so that you could continue to use disposable diapers?

Priorities for Products to be foregone for Environmental Reasons



It is interesting to note that recent experiments to encourage parents to use cloth diapers have largely been unsuccessful. In Belgium for example, in 2002 the Flemish Administration on Waste, OVAM, launched a project designed to encourage the use of reusable diapers. Mothers in a maternity ward in a hospital in Leuven were invited to participate in a pilot programme using reusable diapers for a period of 13 weeks. The project was repeated in 2005 and a report was produced on the project by Deloitte Business Advisory in April 2006. The report showed that:

- it was difficult to get women to agree to participate in the pilot in the first place; 70 percent of the 436 women invited to participate in either phase of the pilot declined;

- of those that did participate in either the 2002 or 2005 phase, only 23 women, that is five percent of the total number of women invited to participate in the pilot, said they intended to continue using reusable diapers at the end of the 13 weeks;
- leakage, user unfriendliness, the extra work it would bring and the cost were the main reasons why people who participated in the trial project did not want to continue using reusable diapers after they left the hospital.

Similar initiatives by local authorities in other European countries to encourage the use of reusable diapers through financial subsidies have failed to make a difference in overall consumer preferences.

Focus group discussions about the quality of life benefits of disposable diapers also attest to their importance. The following are examples of the type of comments that are often made.

"There's just no practical alternative! If I had to use cloth diapers, my life would change so much! I wouldn't HAVE a life!"

"These products are indispensable for our daily lives".

"As a father of two children, I think that the benefits for children of nappies ... are great. Benefits are in terms of practicality, usefulness. They are developed to accommodate modern living. Overall, I think the benefits are safety, comfort, hygiene and lifestyle."

The health benefits of disposable baby diapers

Apart from providing convenience benefits, disposable diapers also offer health benefits. Much academic research has been undertaken to assess the impact of the use of disposable diapers on: -

- The skin health of babies, including the incidence of diaper dermatitis (nappy rash)
- The transmission of infectious diseases.

The evidence from this research shows that innovations in disposable baby diapers have brought real benefits in skin care, dryness and leakage protection. Examples of these innovations include enhanced performance of the absorbent core, which draws wetness away from the baby's skin, and the use of a 'breathable' material for the outer cover of the diaper, which allows air to pass through.

Clinical studies have demonstrated the ability of disposable diapers based on Superabsorbent Polymer (SAP) technology to keep the skin drier as well as showing that a more stable skin pH with less dermatitis is achieved with disposable diapers than with home-laundered cloth diapers.

Babies wearing highly breathable disposable diapers

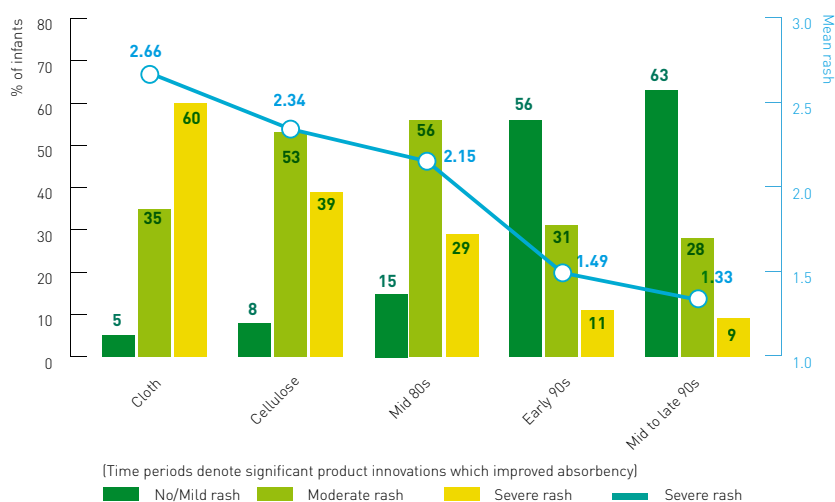
have also been shown to experience significantly less diaper dermatitis compared with infants wearing non-breathable diapers in a series of clinical studies. Severe diaper dermatitis, including confirmed infection with *Candida albicans*, was reduced by up to 50 percent in the groups of children wearing breathable diapers, (see table below).

Leakage of faeces and urine through diapers leads to contamination of hands (of both babies and carers) and of inanimate objects in the surrounding area. Such contamination, coupled with the hand to mouth behaviour of babies, increases the potential for transmission of infectious diseases. This can be a common cause of diarrhoeal illness in day care centres. Faecal contamination can also be responsible for the transmission of hepatitis.

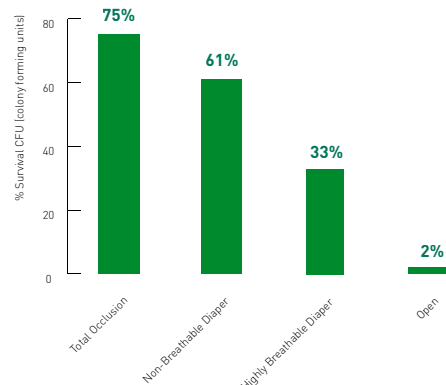
Modern disposable diapers are designed for maximum leakage prevention. The isolation of urine from faecal material facilitated by the SAP helps minimise the formation of ammonia from urea, side leak guards prevent leakage of urine and faecal matter and the outer cover acts as a barrier for urine and stools.

Disposable diapers also eliminate the need for washing and laundering which, unless undertaken at high temperatures and in hygienic conditions (often not easily accessible in developing countries), may not kill the germs that can cause infections.

Product Innovation and Diaper Rash Reduction



Survival of *Candida albicans* on Human Skin under Various Conditions



3) Feminine Care Products and Quality of Life

Throughout their adolescent and adult lives women must manage both regular and intermittent loss of menses and other fluids. During the reproductive years menstrual bleeding can be regular, intermittent, heavy or light. Heavy menstrual bleeding may cause significant social embarrassment, and have a substantial effect on health-related quality of life. Menstruation has attracted, and continues today to attract taboos; even in more liberal societies many men and women are still embarrassed by the subject.

The variety of products now available, and their comfort and size, means that today's generations of girls and women experience much less inconvenience, disruption and embarrassment as a result of menstruation and are able to live active and unfettered lives regardless of their reproductive cycle.

Product advertising over recent decades has helped to bring the subject of menstruation into the mainstream and company consumer affairs departments, internet pages and chat lines about menstruation have provided ready access for girls and women to information and advice.

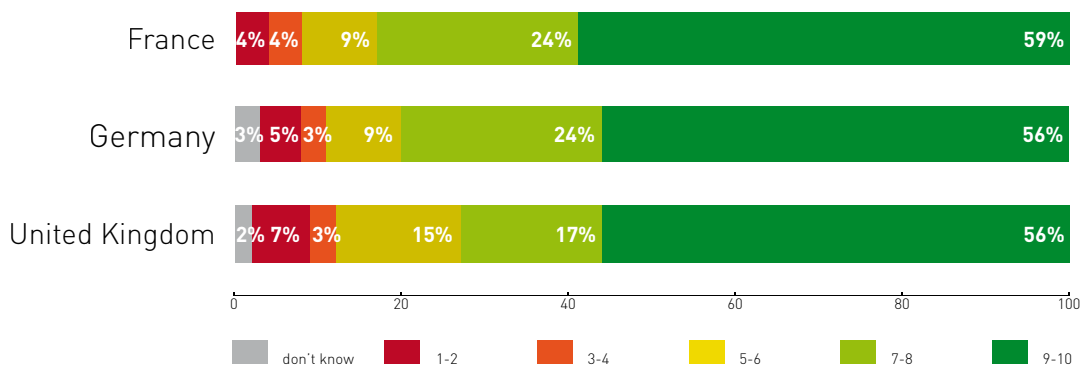
Improvements in the performance and comfort of absorbent hygiene feminine care products have led to significant benefits to the individual user. Tampons by their design offer discretion and freedom during menstruation so that women can engage actively in work, sporting and leisure activities and have increased mobility. The increased effectiveness and absorbency of all types of absorbent hygiene feminine care products can also help to reduce the lost time from work or study as a result of menstruation.

In 2002 a study was undertaken in the US of work loss associated with heavy menstrual bleeding. From a sample of 2805 women, of whom 373 (13.3%) were defined as being in a "heavy flow" group, it was estimated that the expected value of lost wages associated with heavy bleeding per woman is \$1,692 annually.

There is little question in the minds of women surveyed in focus groups or through opinion polling about the importance of absorbent hygiene feminine care products for their overall quality of life. In a survey undertaken in August 2007 which involved over 1100 women aged between 16 and 50 in France, Germany and the UK, 78 percent rated absorbent hygiene

Absorbent Hygiene Feminine Care Products and Quality of Life of Women

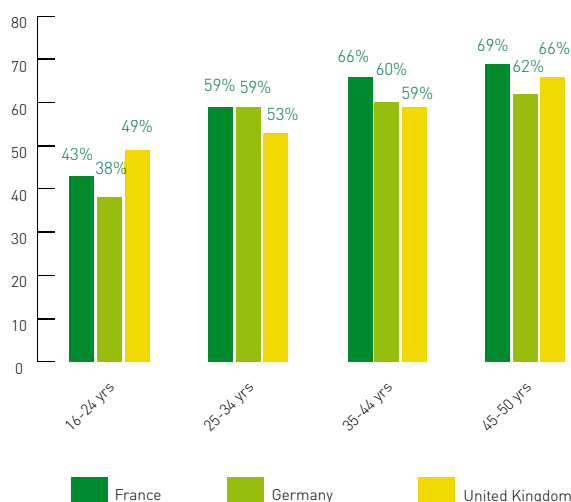
Rate the impact on a scale of 1 – 10 (where 1 is no impact at all) that using absorbent hygiene feminine care products has on the daily quality of life of menstruating women.



feminine care products as having a large or very large impact on their quality of life.

Interestingly, as can be seen in the table below, older women tend to rate the benefits more highly than younger women. This may be because they had experience of less efficient products when they were young and are more aware of how the previous generation had to manage menstruation before such products were available.

Women Rating Absorbent Hygiene Feminine Care Products as Very High Impact on Quality of Life by Age



Comments made by women in focus groups also emphasise the importance of these products to their quality of life.

The negative impact of inadequate access to menstrual protection materials on women and girls in developing countries during their reproductive cycle is another important quality of life issue. The problem of girls failing to attend school during their menstruation, diseases caused by poor menstrual hygiene and the taboo surrounding the topic are all important considerations.

"I wonder what people did before these things got invented...I couldn't imagine having to use rags or something you had to wash out."

"School was about 7 kilometres away and I could not come home easily if I had a problem at school. On most days all taps in the school, including those in the toilets, ran dry. I had to change every 4-5 hours for about 3-4 days and ended up being absent from school at the beginning of each period."

Words of a Young Girl from Pune, Western India

4) Incontinence Products and Quality of Life

Urinary incontinence is a common condition and affects both men and women in different life stages. More than 25 percent of women have experienced incontinence at some time in their life. Around 10 percent have regular problems and the number increases with age. One main reason for female incontinence is the weakening of the pelvic floor muscles which can occur due to pregnancy and childbirth.

Around 4 percent of men experience daily urinary incontinence and the figures rise to 17 percent among elder men. Risk factors for men are infections, prostatectomy (removal of the prostate) and age itself (there is a greater increase in the prevalence of incontinence in ageing men than there is in ageing women).

In later years incontinence can be caused in both men and women by other conditions such as stroke or senile dementia. It is estimated that 55 percent of female residents in long term care facilities in Europe are incontinent.

There are different types of incontinence such as stress, urge and mixed urinary incontinence as well as faecal incontinence (also called bowel incontinence or anal incontinence), that affect people of all ages.

All forms of incontinence can cause isolation, depression and physiological problems and can significantly impact on social and work related aspects of the sufferer's life. In addition, incontinence can be a heavy burden for family caregivers and the community. It is often a major contributing factor in deciding that ageing parents are no longer able to live independently and need a level of care that can only be provided in residential care or nursing homes.

A wide range of products is available to suit varying degrees of incontinence, disability and lifestyle. Light and medium incontinence products are sold in drugstores, supermarkets or pharmacies. Heavy incontinence products are mainly used in residential homes or nursing care environments.

Adult incontinence products have a significant positive impact on the quality of life of individuals suffering from incontinence. These products, by offering security, comfort, discretion and odour control, enable users to maintain their sense of dignity and engender the confidence that allows them to leave their homes, work, take part in social activities and lead a full and satisfying life.

The benefits that adult incontinence products bring to the health care sector are also considerable. They:

- help in infection control and minimise the spread of infection between patients;
- save valuable care assistant time in changing and disposing of products allowing more time for other important caring activities;
- save costs in reducing the need for care of infections and bed sores caused by wetness and leakage;
- save costs and time in washing soiled clothes and bed linen.

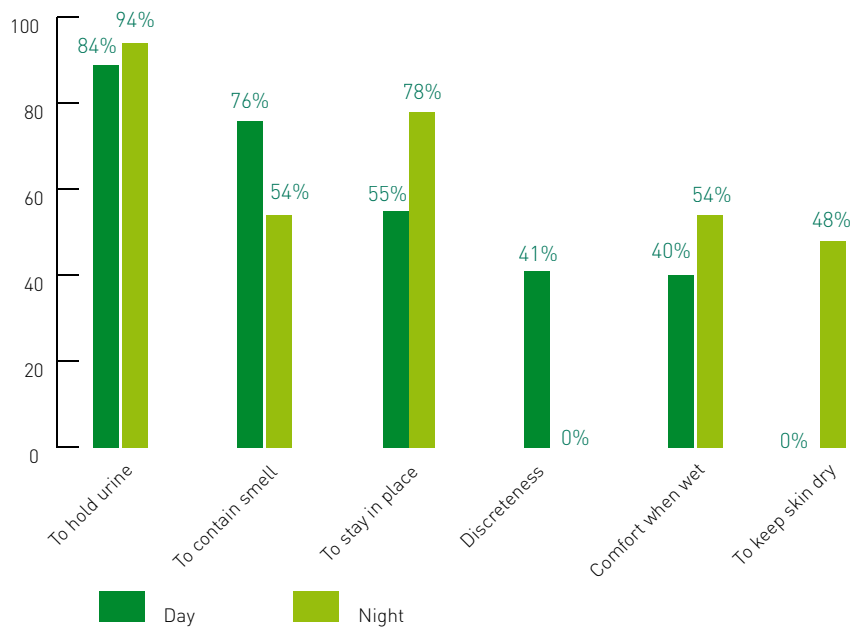
The importance of these products and their economic benefits in addressing the problems created by incontinence is recognised by the fact that in many countries incontinence products are available on prescription from medical professionals and the costs are consequently reimbursed either through health authorities or health care insurers.

For incontinent people a holistic approach of using modern absorbent hygiene products in combination with appropriate skin care and cleansing routines and products can eliminate dermatitis and maintain good skin health.

To date there is little academic or opinion research into quality of life considerations in the usage of absorbent incontinence products. This is not surprising given that individuals are often not willing to admit to suffering from the condition or to talk about their experience of it. Recent academic research (see

references) has been undertaken on the treatment effects of absorbent products for incontinence and their impact on quality of life. Light incontinence sufferers were interviewed about their experiences and ranked pad characteristics in the following order of importance.

Top Five Pad Characteristics for Light Incontinence Sufferers



Verbatim comments from light incontinence sufferers help to bring to life the critical role effective products play in their physical and psychological well-being.

"Discreteness of a pad means a huge amount. You don't want people to see it; you'd be really embarrassed if people knew you had a bladder problem."

"If a pad didn't hold urine then I wouldn't be able to go to work ..."

"It's vital to be able to carry on with everyday life. Knowing that the pad will hold urine gives you security so allows you to do things. If the pad leaks then you stop doing things. It's easy to lose confidence in yourself and stop doing everyday activities."

5) Personal Care Wipes and Quality of Life

Over the past decade an increasingly diverse range of disposable personal hygiene wet wipes products have become available. The growth of the markets for such products is evidence of their popularity with the public.

The appeal of wet wipes in both consumer and health-care markets is primarily one of convenience and ease of use. Busy lifestyles created by the combinations of job pressures, increased activities for children and an overall faster pace of life, mean that many people find themselves pressed for time; wipes allow them to perform daily tasks in substantially less time.

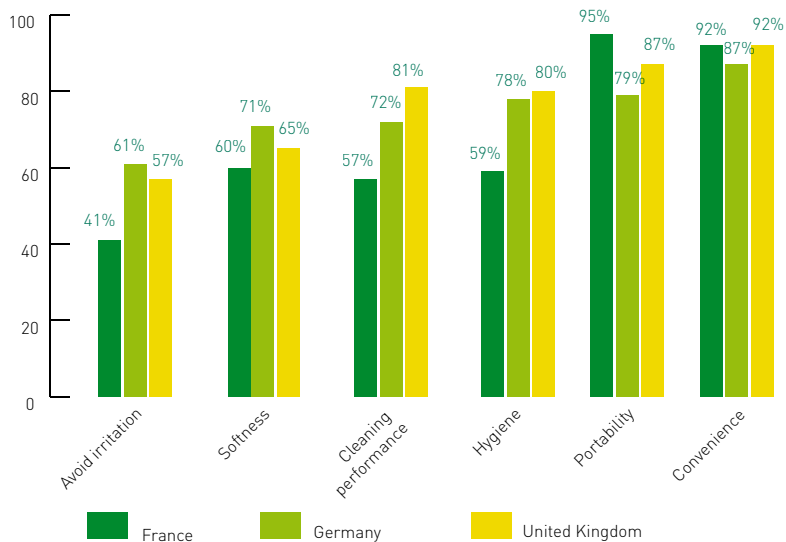
In most cases, wipes also obviate the need for the use of separate 'wet and dry' combinations in cleaning tasks (e.g. cotton wool and water, antibacterial cleaning spray used with cleaning cloths). The portability

of wet wipes enables all types of users more easily to maintain both personal hygiene standards and the cleanliness of their surroundings, which in turn helps to reduce the risk of cross contamination.

As baby wipes have been on the market for the longest time, their usage is widespread and much valued. With babies being a relatively constant source of mess of all types, parents can keep wet wipes handy for food spills and the like as well as for cleaning during diaper changes. When mothers of children under nine in France, Germany and the United Kingdom were asked to indicate their preference for baby wipes over other means of keeping their babies clean, on average they listed convenience, portability and hygiene as the top three reasons for opting for baby wipes.

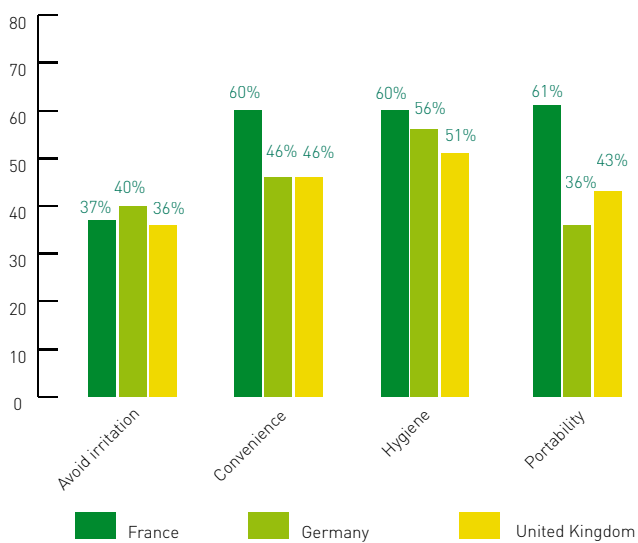


Criteria for Preferring Baby Wipes over Other Cleaning Options



While feminine hygiene wipes are a newer entrant to the market, their benefits for improved quality of life are already well recognised by women who use them. On average, hygiene and convenience are the two characteristics most highly valued.

Benefits of Feminine Hygiene Wipes



6) Summary

Absorbent hygiene products are an important and essential feature of modern day life. They deliver benefits which have a positive impact on the quality of life of millions of people everyday including comfort, hygiene, convenience, portability, reduction in household chores and skin health benefits. Through innovation

and the application of state of the art technology these products are continually evolving to be more effective and more efficient. At the same time, in recognition of the importance of conserving natural resources and minimising waste, their environmental impact is continually being reduced.



References

Akin F, Spraker M, Aly R, Leyden J, Raynor W, Landin W., Effects of breathable disposable diapers: reduced prevalence of Candida and common diaper dermatitis, Paediatric Dermatology. Jul-Aug; 18(4):282-90. 2001.

Berg, R.W., Containment Performance: a Comparison of Cloth and Paper Diapers. Technical Association of the Pulp and Paper Industry Journal. 76:142, 1993.

Contemporary Paediatrics, Disposable Diapers: Effective and Safe, Supplement to March 2000 issue (3/00), 18 pages.

Côté, I., Jacobs, P., and Cumming D, Work Loss Associated With Increased Menstrual Loss in the United States , Obstetrics & Gynecology;100:683-687, 2002.

EDANA, Sustainability Report 2007-2008: Absorbent Hygiene Products, Belgium, 2007.

Forum for Hygiene & Umwelt, 2004 Survey on Disposables for Personal Care, IKW Germany

Getliffe K., Fader M., Cottenden A., Jamieson K., and Green Nicholas, Absorbent products for incontinence: 'treatment effects' and impact on quality of life, Journal of Clinical Nursing, Blackwell Publishing, November 2007.

Kamat, M., & Malkani, Disposable Diapers: a Hygienic Alternative, Indian Journal of Pediatrics Volume 20, November 2003.

Ncompass International Omnibus Survey, Feminine Hygiene and Baby Disposable Absorbent Hygiene Products, Taylor Nelson Sofres, August 2007.

Van, R., Wun C., Morrow A.L., and Pickering L.K., The Effect of Diaper Type and Over-clothing on Fecal Contamination in Day-Care Centers, Journal of the American Medical Association 265:1840, 1991.

The Quality of Life briefing paper is part of an industry initiative to increase knowledge and understanding of the societal benefits and sustainability of absorbent hygiene products and personal care wipes and the social responsibility of the industry.



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